**THE EFFECTS OF CARGO HEIGHT
DISTRIBUTION ON B-747 AND C-17 AIRLIFT**

GRADUATE RESEARCH PAPER

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Abstract

Pallets transported on Boeing 747 (B-747) and Air Force C-17 aircraft in 2009 were analyzed to determine if relaxing the current pallet height restriction of 72 inches to 96 inches would reduce military airlift requirements in Afghanistan. B-747 missions were tracked from the United States to Incirlik Air Base (AB), Turkey and then C-17 missions were tracked from Incirlik AB to six military airfields in Afghanistan. Using data from Air Mobility Command, three models were constructed to dynamically redistribute historical pallets based on user inputs. These models analyzed and redistributed 502 actual B-747 missions carrying over 7,900 pallets and 593 actual C-17 missions carrying approximately 9,400 pallets using a 96 inch pallet height. Since actual pallet contents were unknown, the data was bounded by assuming all pallets contained sand to allow for redistribution to any size or shape.

The models showed that pallet redistribution to a height of 96 inches would significantly reduce C-17 airlift requirements into Bastion and Kandahar airfields in Afghanistan. The other four military airfields were not affected due to cargo throughput throughout the year. B-747 missions showed similar savings. A recommendation was made to change the pallet height restriction from 72 inches to 96 inches for B-747 and C-17 aircraft.

To my wife and children.

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I would like to express my appreciation to my advisor, Dr. James T. Moore, who provided excellent guidance and timely feedback throughout the year.

Myers S. Gray

Table of Contents

List of Figures

List of Tables

Glossary

AB – Air Base
AFB - Air Force Base
ARB - Air Reserve Base
ACL - Allowable Cabin Load
AFB – Air Force Base
AFPAM - Air Force Pamphlet
AMC – Air Mobility Command
AOR - Area of Responsibility (deployed theater)
APOD – Aerial Port of Debarkation
APOE - Aerial Port of Embarkation
B-747 - Boeing 747 aircraft
CDDOC - Combined Deployment Distribution Operations Center
CONUS – Continental United States
CRAF - Civil Reserve Air Fleet
CWT - Customer Wait Time
DDKS - Defense Distribution Department Kuwait
DLA - Defense Logistics Agency
DoD – Department of Defense
ER - Extended Range
FL - Flight Level
FY - Fiscal Year
GAO - US Government Accountability Office
GATES - Global Air Transportation Execution System
GTN - Global Transportation Network
H - Height
ICAO - International Civil Aviation Organization
Inter-theater - cargo movement inside the deployed theater or AOR
Intra-theater - cargo movement between theatres
ITV - In-transit visibility
JMC - Joint Movement Center
L - Length
MHE - Material Handling Equipment
MILAIR – Military Airlift Request
MOG - Maximum on Ground; Refers to maximum aircraft simultaneously serviced
MSC - Military Sealift Command
MV - Mobility Value
NAP - National Airlift Policy
NDAA - National Defense Authorization Act
ODS - Operation Desert Storm
OEF - Operation Enduring Freedom
OIF - Operation Iraqi Freedom
POD - Point of Debarkation
POE - Point of Embarkation

RDD - Required Delivery Date
RFID - Radio Frequency Identification
RWT - Requisition Wait Time
s/t -short tons
SDDC - Surface Deployment and Distribution Command
Transload - moving cargo from one aircraft to another
UTE rate - Utilization rate; average hours flown per aircraft per day
USCENTCOM - United States Central Command
USEUCOM - United States European Command
USPACOM - United States Pacific Command
USTRANSCOM – United States Transportation Command
W - Width

THE EFFECTS OF CARGO WEIGHT DISTRIBUTION ON C-17 AIRLIFT

I. Introduction

The military supply chain management process has significantly lagged behind commercial industry supply chain management for the past two decades. Although the Department of Defense (DoD) has tried to adapt by integrating models from companies such as FedEx and UPS, implementation of these models on a large scale during combat operations has been problematic. In particular, cargo delivery to austere fields in remote combat locations followed by final transportation to the end user is something the commercial industry has not experienced.

Operating in Afghanistan poses many problems for the US. First, it is surrounded by other countries on all sides and is not accessible by ship. Thus, all cargo entering the country must be shipped by ground through foreign countries or delivered by air. Second, a vast majority of the country is covered with mountainous terrain, providing severe aircraft operating limitations for cargo delivery. Finally, the ground transportation system in Afghanistan is virtually non-existent. Very few major roads exist in the country and the roads that are in use are sub-standard for large-scale US cargo operations.

Since the US entered Afghanistan in 2001, operations have been relatively small compared to Operations Desert Storm and Iraqi Freedom. Over the last year and a half, US operations in Afghanistan have increased substantially as military personnel have moved from Iraq to Afghanistan. This increased operations tempo has resulted in increased cargo requirements into Afghanistan. Only six airfields are suitable for large military aircraft to deliver cargo to US troops in the country. Each of these operating airfields have unique operating

challenges such as limited ramp space, limited personnel to service aircraft (MOG), and limited equipment to load / unload aircraft, and process cargo. The major constraint for cargo delivery into Afghanistan is the limited number of aircraft each airfield can support. In order to increase cargo efficiency into Afghanistan, operating aircraft must maximize cargo loads into the country. One way to do this is by decreasing cargo height restrictions and utilize empty space in the aircraft cargo compartment.

The purpose of this research paper is to determine if the supply chain can be made more efficient by utilizing the full capability of CRAF and organic airlift together. If pallet height is increased to 96 inches vice the current standard of 72 inches, heavier cargo pallets may be utilized with existing cargo floor space, thereby increasing overall airlift capability. On a large scale, this additional capability can be used to carry more cargo to maximize delivery to airfields with limited capability to support multiple aircraft. Specifically, the researcher analyzed all Boeing 747 (B-747) missions from the United States to Incirlik Air Base (AB), Turkey and C-17 missions from Incirlik AB to Afghanistan. Historical flight information from 2009 was obtained from Air Mobility Command (AMC) to perform the analysis. This research focused on two questions to determine the effects of cargo efficiency on B-747 and C-17 aircraft.

 (1) How will increased cargo height affect B-747 airlift requirements?

 (2) How will increased cargo height affect C-17 airlift requirements?

The remainder of this paper addresses a review of current literature related to this research, a methodology describing how the researcher analyzed and measured the data, results of the analyzed data, and conclusions.

II. Literature Review

This section begins with an overview of the Civil Reserve Air Fleet (CRAF). Specifically, a brief history of the CRAF program and the necessity of B-747 aircraft to augment the military airlift fleet for delivery of sustainment cargo are discussed. The evolution of military Supply Chain Management since Operation Desert Shield in 1990 shows the advancements and parallels to civilian supply chains and the need for additional military efficiencies to match civilian equivalents. Additionally, US Transportation Command (USTRANSCOM) consistently struggles with the idea of effectiveness verses efficiency when prioritizing and delivering cargo to the warfighter in harms way. Although effectiveness is the ultimate goal, it cannot be achieved without efficiency. Finally, optimal range and payload metrics for military strategic airlift assets are discussed showing the effects of and potential efficiencies with increased cargo weights.

The Civil Reserve Air Fleet (CRAF)

The US Air Force has never owned sufficient aircraft to transport mass passengers and cargo to remote areas of the world to meet wartime operations. Following World War II, the Finletter Commission, established by President Truman, recommended a "military auxiliary [to keep] the airlines strong and healthy" (AFTAS, 2008:10). The CRAF program was signed into law in 1951, officially establishing this military auxiliary. Although the CRAF program has evolved over the decades, participant air carriers have continually received peacetime DoD business while the US military gained the opportunity to utilize commercial aircraft, aircrew, and maintenance, at no cost (AFTAS, 2008:10).

Air carriers that are US flagged, owned, and crewed have the option to join the CRAF program annually. Each participant carrier is required to commit a minimum of 15 to 30 percent

3

of their capable cargo or passenger aircraft, respectively. Additionally, the carrier must provide

four aircrews per aircraft committed to CRAF. Mobility Value (MV) points are assigned to

carriers based on their CRAF commitments. Since a variety of aircraft types can be committed

to CRAF, participating aircraft are categorized based on capability and then matched against

DoD requirements (AFTAS, 2008:19). The following is an example of MV by aircraft type.

Table 1. Mobility Value by Aircraft Type

Aircraft Type	Mobility Value
B-747-100	1.0
DC-10-30	0.9015
MD-11	1.1001
B-747-400	1.5235

For example, if a carrier earns 60 percent of total awarded MV points, the carrier would

receive a 60 percent share of the peacetime missions allocated to CRAF. Air carriers such as

American Airlines and FedEx participate in the program, but do not desire to operate peacetime

missions for the DoD. These carriers form teams consisting of major carriers, such as American

and FedEx along with smaller carriers, and can operate all cargo, all passenger, or a mixture of

the two aircraft services. The team's capacity is pooled to earn a larger share of MV points than

any one carrier could achieve alone, and the smaller carriers operate the team's peacetime

missions. The team is paid for missions flown and the team lead determines how each member

is paid. Typically, the team member that provides a majority of the capacity will act as team lead

and siphon a small percentage of the CRAF payments for themselves to keep the team viable.

The CRAF program is broken into three distinct stages of activation to meet wartime

requirements. Stage I is activated for a regional crisis, Stage II for a major theater war, and

Stage III for national mobilization. Individual carriers or teams must provide a minimum

capability for Stage I and can choose which stage to apply the remainder of their aircraft. If any

of the stages are activated, carriers must provide participating aircraft within 24-48 hours after a mission is assigned (AFTAS, 2008:21).

Table 2. CRAF Carriers and Teams (House, 2009:7)

Alliance Team	FEDEX Team	UPS Team	Independents
American Airlines	Air Transport Int'l	ABX Air	AirTran Airways
Arrow Air	Atlas Air	Alaska Airlines	Allegiant Air
ASTAR Air Cargo	Northwest Airlines	Kalitta Air	Continental Airlines
Delta Air Lines	Omni Air Int'l	National Air Cargo	Frontier Airlines
Evergreen Int'l	Polar Air Cargo	Ryan Int'l Airlines	Hawaiian Airlines
North American	Tradewinds Airlines	Southern Air	JetBlue Airways
United Airlines	Federal Express	United Parcel Service	Lynden Air Cargo
US Airways			Miami Air Int'l
World Airways			MN Airlines
			Northern Air Cargo
			Southwest Airlines

CRAF has only been activated twice in the history of the program, once for Operation Desert Shield/Storm (ODS) in 1990 and once during Operation Iraqi Freedom in 2003 (AFTAS, 2008:10,15). The CRAF program is cost effective for the DoD. According to a 1994 RAND study, it would cost the military approximately $1-3 billion annually to replace CRAF capability with military organic aircraft (McNabb, 2009:2). Of the 34 carriers currently participating in the program, almost 1,100 aircraft are subscribed, doubling DoD capacity requirements for passengers and cargo. The DoD normally expects to provide approximately 40 percent of cargo and 90 percent of passenger requirements during times of both peace and war to the CRAF program (McNabb, 2009:2). Based on current participation numbers, the next several years should produce sufficient aircraft to meet CRAF requirements (AFTAS, 2008:73). However, as the US reduces forces in Iraq and Afghanistan, future non-activated CRAF requirements will be significantly less than the past several years.

Peacetime utilization of the CRAF program is divided into two categories including a "fixed buy" and an "expansion buy." The fixed buy includes guaranteed government payments

to CRAF participants and covers projected airlift for the following fiscal year. These payments can be counted on by CRAF participants to develop their annual business plans. The fixed buy has remained relatively steady since 1997. The expansion buy covers airlift requirements not known in advance, such as contingency operations. These operations cannot be counted on from year to year, but have increased significantly since the beginning of the war in Afghanistan and have become a significant portion of peacetime CRAF income since that time (House, 2009:8-9). Figure 1 below shows the fixed buy verses expansion buy totals from 1997-2008.
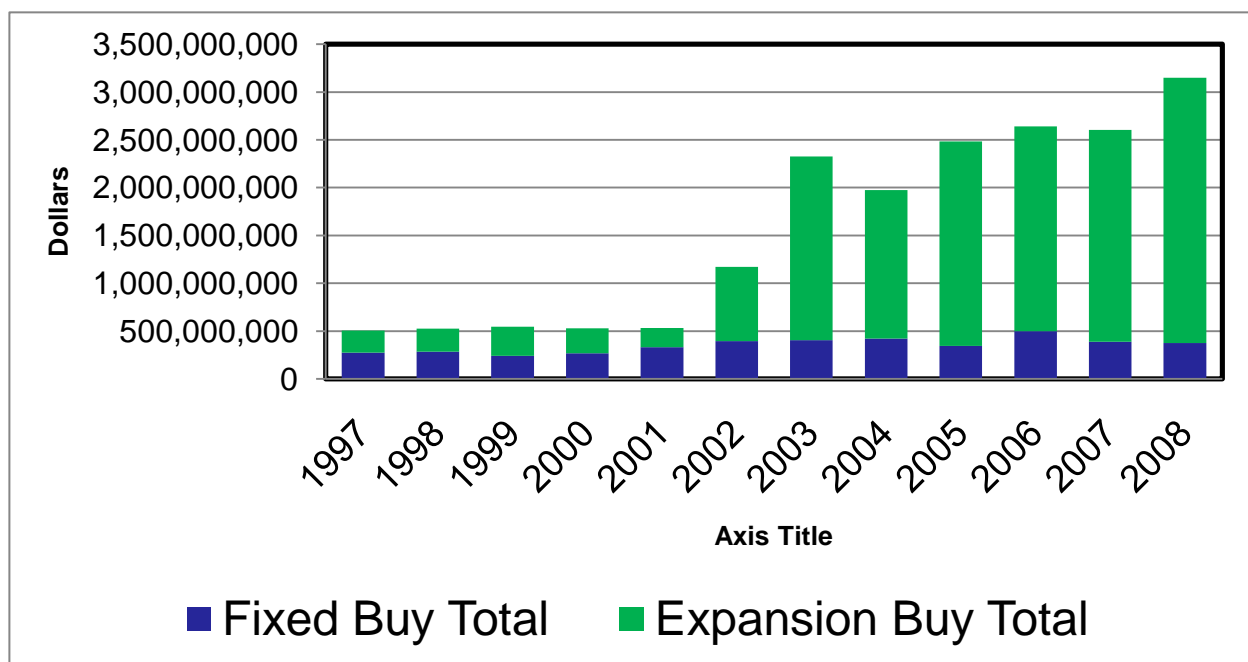
Figure 1. CRAF Fixed Buy vs Expansion Buy Totals (Donovan, 2009:16)

In order to stop individual airlines from allocating all of their commercial business to the CRAF program, the DoD created the 60/40 rule. This rule requires commercial companies not to have more than 40 percent of their business with the DoD to ensure the companies will survive when DoD requirements start to decrease. Unfortunately, when the US economy is in a recession, decreased commercial demand forces many carriers to conduct more than 40 percent of their business with the DoD. Although the 60/40 rule was designed to help commercial

carriers, enforcement is rare. Several carriers form teams to compete for peacetime market share and distribute their allocated DoD missions according to specific team policies. Although teams incur penalties if a member fails to abide by the 60/40 rule, team policies and book keeping are difficult for the government to audit and monitor, so any deviation from the rule is largely overlooked (AFTAS, 2008:69-70). These companies might fail if CRAF requirements go away. However, recessions are temporary and commercial business should increase as time passes.

In 1987, President Ronald Reagan signed the National Airlift Policy (NAP) into law. The law included several guidelines to increase the DoD's partnership with the commercial airline industry. In particular, the NAP requires the DoD to establish minimum utilization rates to maintain operational proficiency and appropriate levels of peacetime cargo airlift augmentation to enhance the effectiveness of the CRAF program (Reagan, 1987:1-2). Low aircraft utilization for CRAF forced commercial partners to fly missions with older, less efficient aircraft, ultimately costing the DoD additional money. The FY2009 National Defense Authorization Act (NDAA) required the Secretary of Defense to "improve the predictability in DoD charter requirements," strengthen CRAF participation to assure adequate capacity, and provide incentives for more efficient and reliable CRAF aircraft (NDAA, 2008:1). For example, CRAF carriers are typically utilized 8-10 hours per day compared to 14-16 hours in the commercial sector. The DoD awards MV bonus points for using fuel efficient aircraft, but low mission utilization deters CRAF partners from using their newer aircraft (AFTAS, 2008:29). According to Atlas Air president Bill Flynn, "AMC needs to reengineer its system to achieve higher utilization of CRAF. Millions of dollars are being wasted because of planning and scheduling efficiencies" (Flynn, 2009:9).

Evolution of Military Supply Chain Management

The military supply chain, or logistics management process has changed significantly since Operation Desert Storm. In 1990, General Norman Schwarzkopf changed the military supply game for the warfighter. Trying to avoid reliving his Vietnam memories of military sustainment stockpiles in the US with slow throughput to the conflict, he brought the stockpiles to the conflict. These "Iron Mountains" included "some 17,450 tracked and wheeled vehicles, 450 aircraft and 1,521 sea land containers at air and sea ports" shortly after the US declared War. Unfortunately, cargo deployed before its documentation and logistics technicians were in theater to receive it. This resulted in backlogged air and seaports with almost no account of what was actually available to the warfighter. An overloaded and broken logistics system was made worse as Army personnel continuously reordered supplies until they arrived. Over a year after Desert Storm ended, sorting, cataloging, and accounting for the mountain of containers was complete and the unused equipment and supplies were shipped back to the US (Daniels, 2008:1).

A Government Accountability Office (GAO) investigation concluded that the supply problems "resulted from an inability to capture visibility of incoming supplies and from difficulties in distributing supplies arriving in theater." Having the iron mountain of supplies in theater did nothing to help the warfighter since no one tracked the shipments, knew what was inside the containers, or had any idea how to deliver the supplies to the final destination until the war entered sustainment mode. After the conclusion of ODS, the Army contracted RAND to provide solutions to their logistical problems. Based on RAND study recommendations, the Army transformed all service logistics processes to streamlined, just-in-time delivery, emulating the industry standard "velocity management" models of FedEx and UPS. Supply system tests

and government studies all determined that the Army's transformation was a complete success, cutting shipping times in half and increasing readiness and reliability levels (Daniels, 2008:2).

When the US declared War on Terror and entered Afghanistan in 2001, the Army's transformational logistics processes were put to the ultimate test. Afghanistan's limited infrastructure of airports and roads combined with a complete lack of seaports, and mountainous terrain throughout the entire country made combat operations and troop resupply challenging. However, the Army's velocity management processes worked. This was most likely due to the limited specialized forces used to wage war in Afghanistan. As the US shifted attention to Iraq, much larger US forces were sent and "a backlog of hundreds of pallets and containers of material at various distribution points due to transportation constraints and inadequate asset visibility" were realized (Daniels, 2008:3). Once again, logistics technicians were deployed to the field after cargo arrived, and in many cases, after combat operations started. The velocity management technologies incorporated from the previous decade were not used effectively. A 2003 GAO study cited "inadequate communications, data system incompatibility, and a lack of training for personnel" as the key elements that failed to provide asset visibility (Daniels, 2008:3). Transportation shortfalls and improper use of cargo-handling assets combined with significant delays due to break-bulk and redistribution of cargo failed the warfighter. The commercial business practices adopted by the Army failed to meet expectations for sustained combat operations (Daniels, 2008:3).

In an effort to correct the mistakes of the Army, the Secretary of Defense directed USTRANSCOM to assume the Army's role for distribution management. As the supply chain process owner for the military's Global Transportation Network (GTN), USTRANSCOM was responsible for managing distribution networks from military suppliers all the way to the

warfighter in the field, otherwise known as "factory to foxhole" (Daniels, 2008:4). This was accomplished through the three arms of USTRANSCOM including AMC, Surface Deployment and Distribution Command (SDDC), and Military Sealift Command (MSC), providing air, land, and sea services.

In late 2004, AMC developed the "Pure Pallet" concept as a means to simplify and streamline the pallet shipment and delivery process. Before this concept, a single "mixed" pallet could contain cargo for multiple customers. When the mixed pallet arrived at a deployed aerial port, it required pallet disassembly, sorting, and reassembly before distribution to the final customer. The additional manpower and time dedicated to processing mixed pallets at limited cargo facilities caused significant shipment delays and introduced pilferage and lost cargo into the process. The threat of attack at deployed locations in the combat zone further complicated the process. A pure pallet by contrast contained only cargo for one customer and could be transloaded from one aircraft to another at forward deployed locations with almost no time delays. "The focus [was] on airlifting shipments to the warfighter at the right speed, at the right time, and most important, on the right pallet to a designated location" (Diamond, 2008:53).

The pure pallet process starts at the point of embarkation (POE) aerial port. Cargo is divided into sections or lanes by DoD address code, similar to zip codes used by the US Post Office. This process worked well for customers who required significant levels of cargo to be delivered, but was very inefficient for customers requesting supplies that did not fill an entire pallet. Since organic airlift is a limited asset, it is imperative to maximize the efficiency of each aircraft by utilizing full cargo loads. Some address codes were combined to fill a single pallet and expedite shipping. Although Army and Marine Corps officials were willing to wait an additional three to five days for cargo to pile up at a particular address code before shipment,

10

pallets were still delivered faster than with the mixed pallet process. Pure pallets were delivered to customers in less than nine days while mixed pallets took several weeks by comparison (Diamond, 2008:54).

Also in 2004, USTRANSCOM initiated the Combined Deployed Distribution Operations Center (CDDOC), located in Kuwait to assist US Central Command (USCENTCOM) with the intra-theater cargo distribution process. It initially comprised a small cadre of experts from its predecessor, the Joint Movement Center (JMC), USTRANSCOM, Defense Logistics Agency (DLA), Army Material Command, and other service components. The goals were to make processes more efficient, to handle in-transit visibility including Radio Frequency Identification (RFID) management, sustain and retrograde cargo, and synchronize strategic and operational distribution performance measures. The core cadre of operators had "reachback" capability to their CONUS-based counterparts to maximize throughput efficiencies while keeping the number of personnel deployed to the CDDOC as low as possible. Similar to a commercial industry view of process reengineering, these experts tried to consult with and assess customer wants and desires to determine where to focus attention on broken processes. Additionally, CDDOC personnel were empowered with relatively high decision-level ability to help streamline inter-organization communication, process ownership, and flexibility. The CDDOC realized $25 million in savings in the first year alone after standup, providing commanders increased visibility on troops and cargo flowing intra- and inter-theater.

The CDDOC was not without problems. Since 2004, several focus areas have been identified and many were fixed including intra-theater surface transportation, cross-dock operations, in-transit visibility and RFID issues, theater distribution management, and surface convoy to air conversion. Intra-theater surface transportation identified plans to implement

theater support vessels, reducing the transit time for smaller cargo from twelve days to two days.

Cross-docking problems involved identification and appropriate management of commercial

containers being used for storage, force protection and life support in the theater, costing over

$12 million per month in detention fees. ITV and RFID problems were largely related to

personnel training issues. Many individuals did not have a robust training background to

understand ITV and other systems providing mass data transmission for the military. Also, many

RFID policies were not followed at distribution locations, thereby negating visibility savings

which the technology provided. In an effort to meet required delivery dates to the end user, the

CCDOC created the Defense Distribution Depot Kuwait, Southwest Asia (DDKS). A subset of

the DLA, this organization significantly reduced customer wait times by increasing lines of

communication between the supplier and requester. Finally and perhaps one of the biggest

success stories was the conversion of Iraq surface convoys to air. This initiative minimized

convoy operations between military bases in Iraq and instead transported convoy cargo by air.

Although the program significantly increased overall costs, it also saved convoy vehicles, cargo,

and many lives (Croft, 2006:25).

Effectiveness vs. Efficiency - Army vs Air Force Ways of Thinking

Major Jeffery Brown's 2004 thesis, Modeling and Analysis of CENTCOM's Theater Air

Distribution System, discussed the tradeoffs and issues associated with effectiveness verses

efficiency. Although not formally defined in Air Force (AFDD 2-6) or Joint Doctrine (JP-4),

Major Brown defined effectiveness "in terms of how rapidly and timely the user's goods travel

from a pick-up point to a desired delivery point," and efficiency "as a function of resource

utilization." (Brown, 2004:1). Military leadership agreed that cargo should be delivered with the

highest priority and in the shortest amount of time at the beginning of a war, epitomizing

effectiveness. However, the level of support at the onset of a war cannot be sustained for long periods of time. Military units on the front lines of battle require both priority one lifesaving equipment, and long-term sustainment supplies. The entirety of the equipment and supplies cannot always remain top priority for every unit on the battlefield--there are not enough airlift assets to support that request on a large scale. "The balance between [effectiveness and efficiency] rests in the Operational Art of the Commander" (Brown, 2004:2).

Like any customer in the corporate sector, the Army has expectations for cargo delivery and measures those expectations with metrics including customer wait time (CWT) and requisition wait time (RWT) (RAND, 2003:1). Tracking CWT was mandated by the DoD in 2000 to measure logistics performance in facilitating the repair of broken equipment and provide feedback to process owners and managers in the supply chain to maintain continuous improvement for the warfighter (RAND, 2003:2). Since longer wait times could reduce the customer's ability to fight the enemy, effectiveness was more important than efficiency. However, inefficiencies in the supply chain and requesting ALL cargo as top priority increased CWT. Past Army experiences dealing with a lack of efficiency from other services and increased CWT have instilled a culture of carrying more reserve supplies and continuously ordering "just-in-case" supplies. Building confidence in military supply chain processes over time with consistent and efficient delivery of supplies is the only answer to changing the culture (RAND, 2003:1).

According to Major Brown, USCENTCOM tracks backlog pallets awaiting transportation and the percentage of cargo delivered by the required delivery date (RDD). Although a target of zero backlog pallets was the goal, it was not attainable and an artificial threshold was set to judge the health of the system (Brown, 2004:40). The backlog pallet metric did not consider cargo

priority or RDD, so lower priority "opportune cargo" moving space-available without official validation counted the same as top priority pallets for intra-theater airlift (Brown, 2004:42). The percentage of cargo delivered by RDD was an appropriate effectiveness metric because it measured airlift performance against user-defined time constraints (Brown, 2004:42).

Major Brown's research recommended USTRANSCOM use two metrics for intra-theater airlift efficiency, average payload per mission and utilization (UTE) rate. The UTE rate measures the number of average hours flown per aircraft per day. Although traditionally used as an effectiveness metric, an aircraft could have a high utilization rate without moving any cargo (AFPAM 10-1403, 2003:27). Combining the UTE rate with average payload per mission provided a useful measure of efficiency (Brown, 2004:38).

Senior military leaders must understand the symbiotic nature of efficiency verses effectiveness. Effectiveness alone can only be sustained for a short period of time with limited assets. For long, sustained operations, effectiveness can only be achieved through efficiency in the supply chain system (Croft, 2006: 44).

Optimal Range/Payload Metrics for Strategic Airlift Aircraft

In 2004, Major Kenneth Greenstreet conducted a study to explore optimal range and payload metrics for strategic airlift aircraft, including the C-5 and C-17. He argued that planning charts used by USTRANSCOM and AMC failed to incorporate additional factors, such as historical weather patterns at cruise altitude or reserve fuel. The research looked at current enroute airfields in US European Command (USEUCOM) and US Pacific Command (USPACOM) with a focus on the routes from Dover AFB to Ramstein AB in the European theater and Hickam AFB to Yokota AB for the Pacific theater (Greenstreet, 2004:12).

Air Force Pamphlet 10-1403 (AFPAM 10-403, 2003), Air Mobility Planning Factors, is used by USTRANSCOM and AMC to plan AMC missions both with organic airlift and CRAF aircraft to maximize cargo throughput. The planning factor charts are conservative to account for unknowns in a real world environment. Allowable Cabin Load (ACL) is defined as the maximum payload which can be carried on a mission after accounting for takeoff, landing, and / or zero fuel weights (AFPAM 10-1403, 2003). In particular, C-17 aircraft are planned to fly with 45 short tons (s/t), or 90,000 pounds of cargo for a 3,200 nm leg. The distance from Dover AFB to Ramstein AB is approximately 3,470 nm.

Additional factors, such as takeoff temperatures, departure climb gradients, enroute temperature and weather, and cruise altitude can all affect ACL and aircraft range. Also, unknown fuel factors including holding delays, thunderstorm maneuvering, unreliable navigational aids, Category I routing, and the use of in-flight anti-ice devices can negatively affect overall aircraft capability. Using standard atmospheric planning conditions, a turbojet aircraft like the C-17 will realize increased performance and range with increased altitude. However, a heavier aircraft has a lower maximum altitude ceiling. Greenstreet provides an illustration of the weight-to-altitude trade-off. Assume that a fully loaded C-17, weighing 580,000 pounds, is scheduled to fly from Dover AFB to Ramstein AB at a cruise altitude of 31,000 feet (Flight Level 310, or FL 310) with no wind considerations. The fuel required to complete the route of flight is approximately 135,000 pounds. The maximum aircraft weight for FL 330 is 540,000 pounds with 126,000 pounds of fuel required. In other words, the aircraft weight is decreased by 40,000 pounds between FL 310 and FL 330, but the fuel required is decreased by only 9,000 pounds. Flying at FL 330 would save fuel overall, but at the expense of 31,000 pounds of overall cargo.

Greenstreet found that the optimal cruise altitude to maximize cargo loads between Dover AFB and Ramstein AB is FL 290 for C-17 aircraft, with the next best option being FL 310 or FL 270. On average, FL 290 yielded an ACL of 121,000 pounds for non-extended range and 125,750 pounds for extended range C-17 aircraft. He concluded that USTRANSCOM and AMC should utilize higher planning weights to "take advantage of the entire cargo compartment, including the vertical," so C-17 aircraft could maximize efficiency.

Table 3. C-17 Extended Range (ER) and Non-ER Data from Dover to Ramstein.

C-17 ER Data Dover AFB to Ramstein AB

Flight Level	AVG ACL	STD Dev	STD Error	Upper 95% C.I.	Lower 95% C.I.	Planning Factor	t-test statistic	$\alpha = 0.05$, $t_c = -1.796$	p-value
270	122.58	2.9	0.85	124.45	120.72	90	38.42	Fail to Reject	1.0000
290	125.75	2.0	0.58	127.02	124.48	90	61.75	Fail to Reject	1.0000
310	120.92	3.3	0.96	123.02	118.81	90	32.30	Fail to Reject	1.0000
330	92.75	2.5	0.72	94.33	91.17	90	3.82	Fail to Reject	0.9986
350	53.75	2.3	0.68	55.24	52.26	90	-53.66	Reject	0.0000

C-17 Non-ER Data Dover AFB to Ramstein AB

Flight Level	AVG ACL	STD Dev	STD Error	Upper 95% C.I.	Lower 95% C.I.	Planning Factor	t-test statistic	$\alpha = 0.05$, $t_c = -1.796$	p-value
270	105.58	14.93	4.31	115.07	96.10	90	3.62	Fail to Reject	0.9980
290	121.00	10.40	3.00	127.61	114.39	90	10.32	Fail to Reject	1.0000
310	120.58	4.03	1.16	123.15	118.02	90	26.27	Fail to Reject	1.0000
330	92.75	2.49	0.72	94.33	91.17	90	3.82	Fail to Reject	0.9986
350	53.75	2.34	0.68	55.24	52.26	90	-53.66	Reject	0.0000

Summary

The CRAF program is an integral part of the military supply chain management process. By utilizing CRAF aircraft at levels commensurate with commercial business, the DoD can gain significant cost savings by enticing carriers to use more efficient aircraft for DoD cargo. Although the military supply chain has made quantum leaps with efficiency since 1990, military practices are still not equivalent to the commercial sector. Part of the problem is the culture disparity between military services regarding effectiveness verses efficiency. Finally, planning weights for military and CRAF aircraft are too conservative and result in inefficient use of existing aircraft. Higher cargo weights in aircraft should yield fewer overall missions for the military.

III. Methodology

Scope

To limit the scope of AMC's daily world-wide missions, the research focused on B-747 missions from the CONUS to Incirlik AB, Turkey and C-17 missions from Incirlik AB to their final airfield destinations in Afghanistan. This flow of B-747s from the CONUS to Incirlik AB followed by the same cargo traveling via C-17 from Incirlik AB to its final destination in Afghanistan was a normal flow from the Tanker/Airlift Control Center (TACC), a subordinate unit of USTRANSCOM and Air Mobility Command. Both B-747 and C-17 aircraft were chosen because their reliabilities are among the highest of all aircraft and these aircraft maximize throughput throughout the DoD global supply chain system. For example, the fastest and most efficient way to send air cargo from the CONUS to an intermediate overseas location is with B-747 aircraft. Likewise, the most efficient method of air cargo delivery to locations in the combat zone is with the C-17. Finally, both aircraft could accommodate the proposed 96 inch pallet height for this research.

Assumptions and Limitations:

Maximizing the potential of each pallet to a height of 96 inches required each pallet to remain a "pure pallet" without the need to subdivide (break-bulk) the pallet while enroute to final destination. For the purposes of this paper, pure pallet cargo is defined as cargo destined for the same location in Afghanistan.

Material Handling Equipment (MHE) was assumed to be available at Incirlik AB and all final Afghanistan locations to handle appropriate B-747 and C-17 aircraft. Since this research

focused on historical data, the required MHE was in place or the aircraft would not have transited the location.

To simplify cargo analysis, all pallets were assumed to be a standard size of 108" x 88". Married, oversized, and outsized pallets were redistributed into standard pallets. B-747 aircraft carry standard pallets only.

Current standards for the B-747 and C-17 were also assumed. These include a maximum pallet capacity of 42 and 18 for B-747 and C-17 aircraft, respectively. Each standard pallet was assumed to have a maximum weight capacity of 10,000 pounds.

Unfortunately, the Global Air Transportation Execution System (GATES) database did not provide any information on pallet contents. Therefore, it was impossible to determine how to redistribute pallet contents to take advantage of the additional 24 inches of pallet height. To overcome this limitation, the researcher assumed the contents of each pallet contained sand and could be redistributed to any dimensions.

GATES also did not provide the actual length and width of pallet contents. It only showed pallet height and volume. Therefore it was impossible to determine the actual dimensions of pallet contents other than height. To account for this, the researcher assumed pallet contents maximized the length and width of a standard pallet. For example, if a pallet contained a single box measuring 12"L x 12"W x 12"H, it was considered as 108"L x 88"W x 12"H. Any positive results would not only be achievable in reality, but underestimated by the results of this research.

Data

Historical data for analysis were obtained from AMC's Global Air Transportation Execution System database. The following is a screenshot of sample data from GATES.

Table 4. GATES screenshot. See Appendix A for header Key and definitions.

ATMS_ID	PLT_ID	PLT_DT	PLT_GROSS_WT	APC	APOE_MSN_ID	APOE_LEG_ID	MNFST_APOD	APOD_MSN_ID	APOD_LEG_ID	DEP_DT_TM	MDS	TAIL_NUM	MSN_PRIORITY	ARR_DT_TM
I1H040414345	09R3HV	22-Apr-04	3640	KWI	GMGJ2226S112	300	KEZ	GMGJ2226S112	9999	21-Apr-04	C130H	60413	1	21-Apr-04
AU1040500211	0R95DR	25-Jun-04	6300	OR9	ABW02640A174	500	DOV	ABW02640A174	9999	24-Jun-04	C005B	60016	1	25-Jun-04
AU1040601108	0R96VY	15-Sep-04	1110	WRI	6JH543W11176	100	SUU	6PH543W11177	150	24-Jun-04	KC010A	70120	1	24-Jun-04

APOE_APC	POD_APA	POE_ICAO	APOD_ICAO	DIM	PLT_APOE	PLT_APOD	PLT_VOL	PLT_HT	PLT_NET_WT	PLT_PCS_QY	LTMT_CN	PLT_TY_CD	PAL_CNFG_CD	EVQ_PAL_PS
KWI	KEZ	OKBK	OKAS	Z	SDA	FRU	754	90	3340	3	FB5804	L	PC	10
OR9	DOV	ORBD	KDOV	A	OR9	DOV	300	55	6300	1	FB4497		PC	10
WRI	SUU	KWRI	KSUU	A	OR9	OKO	63	43	802	1	H91782	L	PC	10

GATES information was stored in a Microsoft Access database. Each line of the database contained information for a single pallet. Any line showed when and where the pallet was built, gross and net weight, pallet height, volume, and equivalent pallet positions if the pallet was greater than the standard size of 108" x 88". Also, each line showed aircraft movement in the form of an aircraft mission number, aircraft type, tail number, mission priority, and departure and arrival airfield.

One database query was used to extract specific information of importance to the research. The query pulled all pallets flown by B-747 aircraft to Incirlik AB, Turkey with Afghanistan destinations, sorted by pallet identification (PAL_ID). It also pulled all C-17 missions from Incirlik AB to Afghanistan, also sorted by pallet identification. The query resulted in 16,134 records of data and the records were exported to Microsoft Excel for manipulation and analysis. Once in Excel, the researcher added one column to the data set which divided the equivalent pallet positions (EVQ_PAL_PS) by 10 to show the actual number of pallet positions consumed by each pallet. For example, an equivalent pallet position of 15 was converted to 1.5, indicating the pallet consumed 1.5 spaces on the aircraft. Most pallets consumed one position only.

The 2009 GATES database did have some discrepancies. Several records did not have a departure or arrival date listed. The database should have been complete since it was acquired in March 2010. All of the model analysis was based on departure date and any records not showing a valid date (blank) were not used.
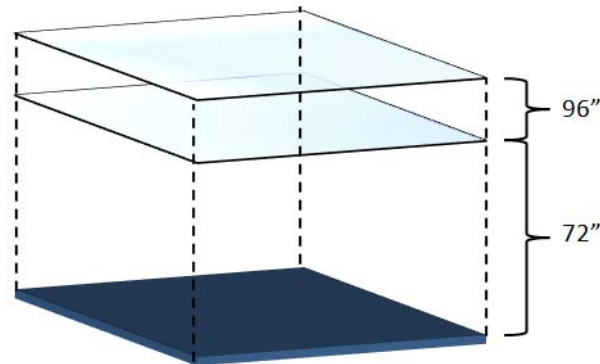
Figure 2. Pallet height increase from 72" to 96".

The Models:

In order to make the analysis as real as possible and provide a dynamic look at the data, the researcher developed three models to predict outcomes based on user inputs. The assumptions behind each model were more restrictive than the previous to produce more conservative results. The models also verified analysis listed in the previous section.

Each model was developed in Excel, using raw data from GATES. Editable fields to analyze data included maximum number of pallets for the aircraft, maximum height of each pallet in inches, and date/time start and end fields. Output fields included original number of missions, pallets, and average weight and height of each pallet for the input timeframe selected by the user. Additional output fields for the optimized cargo included number of missions,

number of pallets, average height and weight, average weight per inch, and weights for the heaviest and lightest pallets. Each of these output fields were further subdivided by all the airfield operating locations in Afghanistan. A key to all the fields is provided in Appendix C.

Original calculations. The number of missions was calculated by dividing the number of actual pallets by the maximum number of pallets per aircraft as defined by the user. The actual number of missions flown was not used in any of the models. The number of pallets was computed by counting all pallet final destination cargo from the GATES output. Average pallet height was computed by summing all pallet heights and dividing that number by the total number of pallets. Average pallet weight was computed by summing all pallet weights and dividing this number by the total number of pallets.

New calculations. The new number of pallets was computed by summing the actual pallet heights and dividing that number by the maximum pallet height as defined by the user. The number of missions was calculated by dividing the new number of pallets by the maximum number of pallets per aircraft as defined by the user. The number of missions was rounded up to the next whole number since only whole aircraft are flown. Average height was the new number of pallets multiplied by the maximum height defined by the user and divided by the new number of pallets. Average weight was computed by dividing the sum of all pallet gross weight by the sum of all pallet height and multiplying that number by average height. Average weight per inch was the sum of all gross pallet weight divided by the sum of all pallet heights. Average weight of the heaviest and lightest pallets were computed by multiplying the average weight per inch by the maximum specified height and "leftover" height of the last pallet, respectively.

Model Advantages. First, the actual number of missions from GATES would not have provided an accurate picture since a majority of the B-747 missions were flown with mixed

21

cargo destined for Iraq, Afghanistan, and other countries. These models assumed each final

destination in Afghanistan had dedicated missions and did not mix cargo destined for any other

location. Calculating missions in this manner simplified calculations and provided an easy

comparison to missions containing redistributed pallets and the other models. It also sub-

optimized mission savings to provide more conservative results.

Second, average pallet weight was computed using actual cargo weight for the timeframe

specified instead of using an arbitrary weight per inch multiplied by height. Computing average

pallet weight in this manner yielded the most realistic averages based on historical data.

Finally, the user-defined maximum pallet height allowed flexibility to experiment with

multiple pallet heights. This was particularly useful when certain timeframe ranges calculated an

average pallet weight over 10,000 pounds.

		1		2				
Acft Type		B747		C17				
Max Pallets		42		18				
Max Height		96		96				
Timeframe		1/1/09 0:00		12/31/09 23:59				
B747	Data	Model 1						
	Afghanistan	Locations:						
		AZ1	KBL	KDH	OA1	OA4	TE2	Total
	# Msns	84	0	103	1	1	2	191
Original	# Pallets	3519	0	4311	1	2	80	7913
	Avg Height	56.84	0.00	61.38	84.00	40.50	63.26	59.3771
	Avg Weight	3,478.40	0.00	3,961.34	2,330.00	3,255.00	2,059.19	3726.955
	# Msns	50	0	66	1	1	2	120
New	# Pallets	2,083.60	0.00	2,756.24	0.88	0.84	52.72	4894.281
	Avg Height	95.98	0.00	95.97	84.00	81.00	95.49	
	Avg Weight	5,873.55	0.00	6,194.17	2,330.00	6,510.00	3,108.21	
	Avg Wt/Inch	61.19	N/A	64.54	27.74	80.37	32.55	
	Avg Heaviest	5,874.67	N/A	6,195.88	2,662.86	7,715.56	3,124.79	
	Avg Lightest	3,549.28	N/A	1,484.43	2,330.00	6,510.00	2,245.94	
% Reduction in Missions:		40.48%	N/A	35.92%	0.00%	0.00%	0.00%	37.17%
% Reduction in Pallets:		40.79%	N/A	36.06%	12.50%	57.81%	34.10%	38.15%

C17	Data	Model 1						
	Afghanistan	Locations:						
		AZ1	KBL	KDH	OA1	OA4	TE2	Total
Original	# Msns	232	0	285	2	1	6	**526**
	# Pallets	4175	0	5125	21	1	102	**9424**
	Avg Height	55.37	0.00	59.29	54.67	29.00	57.19	
	Avg Weight	3,399.06	0.00	3,832.26	5,156.71	2,970.00	2,053.14	
New	# Msns	134	0	176	1	1	4	**316**
	# Pallets	2,408.23	0.00	3,165.07	11.96	0.30	60.76	**5646.323**
	Avg Height	95.97	0.00	95.97	95.67	29.00	95.62	
	Avg Weight	5,890.87	0.00	6,203.51	9,024.25	2,970.00	3,433.11	
	Avg Wt/Inch	61.38	N/A	64.64	94.33	102.41	35.90	
	Avg Heaviest	5,892.75	N/A	6,205.33	9,055.69	9,831.72	3,446.65	
	Avg Lightest	1,350.42	N/A	452.47	8,678.37	2,970.00	2,620.89	
% Reduction in Missions:		42.24%	N/A	38.25%	50.00%	0.00%	33.33%	**39.92%**
% Reduction in Pallets:		42.32%	N/A	38.24%	43.06%	69.79%	40.43%	**40.09%**

Figure 3. Screenshot of Model 1.

Subdividing each Model. Although a wonderful snapshot, the annual timeframe of the model assumed all pallets were available at the beginning of the timeframe. The researcher further subdivided timeframes into 7-day weeks starting with 1 January 2009 and ending with 31 December 2009. Looking at the model in a weekly format assumed all pallets which departed the CONUS during that 7-day timeframe were available on day one. This provided a more realistic picture of actual pallets and missions in the system during any given week. It also helped identify average pallet weights exceeding the 10,000 pound limitation. Any redistributed pallets weighing more than 10,000 pounds on average for a week were reexamined to determine optimal pallet height without exceeding the pallet structural limit.

Model Specifics. Each of the three models were virtually identical with only minor assumptions separating them. Model 1 examined and redistributed all pallets for the selected aircraft (B-747 or C-17) based on the criteria mentioned above. Under this model, if a pallet consumed more than one pallet position, the model rounded up to the next whole number. For example, if a pallet's equivalent pallet position was anything between 1.1 to 1.9, the model

assumed two pallets. Model 2 only recognized those pallets that consumed a single pallet position. In other words, any pallets with an equivalent pallet position of 1.1 or higher were not redistributed. A supplemental table was used to count only those pallets that consumed 1.1 or greater pallet positions. Both the redistributed data and non-redistributed supplemental data were summed to provide a total picture for comparison with other models and original mission flow. An example is in the figure below.

B747	Data	Model 2						
	Afghanistan	Locations:						
		AZ1	KBL	KDH	OA1	OA4	TE2	Total
Original	# Msns	73	0	88	1	1	2	165
	# Pallets	3031	0	3688	1	2	80	6802
	Avg Height	62.57	0.00	67.49	84.00	40.50	63.26	
	Avg Weight	3,712.45	0.00	4,037.86	2,330.00	3,255.00	2,059.19	
New	# Msns	48	0	62	1	1	2	114
	# Pallets	1,975.51	0.00	2,592.59	0.88	0.84	52.72	4622.542
	Avg Height	95.98	0.00	95.98	84.00	81.00	95.49	
	Avg Weight	5,694.55	0.00	5,743.01	2,330.00	6,510.00	3,108.21	
	Avg Wt/Inch	59.33	N/A	59.83	27.74	80.37	32.55	
	Avg Heaviest	5,695.96	N/A	5,743.91	2,662.86	7,715.56	3,124.79	
	Avg Lightest	2,907.31	N/A	3,410.45	2,330.00	6,510.00	2,245.94	
% Reduction in Missions:		34.25%	N/A	29.55%	0.00%	0.00%	0.00%	30.91%
% Reduction in Pallets:		34.82%	N/A	29.70%	12.50%	57.81%	34.10%	32.04%
Supplemental		AZ1	KBL	KDH	OA1	OA4	TE2	Total
	# Msns	12	0	15	0	0	0	27
	# Pallets	488	0	623	0	0	0	1111
Model 2 + Supplemental		AZ1	KBL	KDH	OA1	OA4	TE2	Total
Original	# Msns	85	0	103	1	1	2	192
	# Pallets	3,519	0	4,311	1	2	80	7913
New	# Msns	60	0	77	1	1	2	141
	# Pallets	2,463.51	0.00	3,215.59	0.88	0.84	52.72	5733.542
% Reduction in Missions:		29.41%	N/A	25.24%	0.00%	0.00%	0.00%	26.56%
% Reduction in Pallets:		29.99%	N/A	25.41%	12.50%	57.81%	34.10%	27.54%

Figure 4. Screenshot of Model 2.

Model 3 was more restrictive than the first two models. This model included all the redistributable data from Model 2, but added a new requirement to examine only those pallets with a height greater than 48 inches. The 48 inch restriction was an arbitrary number chosen by the researcher. If a pallet height was 48 inches or less to begin with, then it would have been

redistributed to meet the 72 inch height restriction if it could have been. Anything greater than 48 inches might not have been available for redistribution under the 72 inch restriction. Once again, a supplemental table was created to account for all the pallets not considered for redistribution under Model 3. Supplemental information was added to Model 3 redistribution results to form a more accurate picture for comparison to the other models.

Once these models were created, various scatter graphs were developed in Excel to visually represent model behavior compared to actual missions and pallets. The X-Axis always represented the week number (1-52) and the Y-Axis varied depending on the graph measurement. Each graph was developed for B-747 and C-17 aircraft separately. The graphs included the following:

1. Number of pallets transported per week. The Y-Axis showed number of pallets per week and the data set included aggregate pallets transported and segregation between each Afghanistan destination.

2. Average pallets per mission for Model 1 only. The Y-Axis showed the average number of pallets per mission. The data set included actual pallets per mission (no data manipulation), modeled pallets per mission (original missions computed as discussed above), and redistributed pallets per mission.

3. Average pallets per mission for all models. This was the same as the previous graph, but included actual pallets per mission and redistributed pallets per mission for all three models.

4. Number of missions per week for Model 1 only. The Y-Axis showed the number of missions per week. The data set included actual missions flown per week, modeled missions per week, and redistributed missions per week.

5. Number of missions per week for all models. This was the same as the previous graph, but included actual missions per week, and redistributed missions per week for each model.

Each of the three models have strengths and weaknesses depending on what the user is trying to derive. A number of other models could have been created based on other specific criteria, but these three provide an adequate picture of the data. Once the models were created and checked for consistency, the researcher analyzed the 2009 GATES data. The results and analysis are included in Chapter IV.

IV. Results and Analysis

Following the natural mission flow as specified in Chapter III, the data were divided into two groups. The first group dealt with B-747 missions only. These missions were flown from various CONUS locations to Incirlik AB, Turkey where the cargo was offloaded and stored in the Aerial Port yard. The second group dealt with C-17 missions only. The C-17 missions transported the pallets from Incirlik's Aerial Port yard to their final destination in Afghanistan. In 2009, pallets were delivered to six locations, including Bastion (AZ1), Kabul (KBL), Kandahar (KDH), Bagram (OA1), Salernio (OA4), and Tereen (TE2), Afghanistan. Both B-747 and C-17 groups divided cargo by final destination in Afghanistan. Appendix C shows port identification codes and their airfield locations.

Each group was analyzed using the three models outlined in Chapter III. Of note, the original number of missions listed in the models was not the actual number of missions flown. The original number of missions was computed by dividing the number of pallets by the maximum available pallet load of the aircraft flown. For example, 80 pallets would be computed for two B-747 missions or five C-17 missions because the maximum aircraft load is 42 and 18 pallets, respectively. In reality, five B-747 and 10 C-17 aircraft might have flown those same 80 pallets. The researcher used this method for simplicity and consistency throughout the three models. The actual number of missions flown will be compared to computed original and redistributed number of missions later in this chapter.

Furthermore, each model optimized missions based on final destination. For example, assume 42 pallets were transported during a given week on B-747 aircraft and the total number of pallets was equally distributed to the Afghanistan locations (For six locations, this equals seven pallets per location). Each model would sub-optimize missions based on final Afghanistan

27

location and the six aircraft required to transport the 42 pallets to Incirlik AB. In reality, only one B-747 aircraft would have been required to transport the same 42 pallets. This sub-optimization was used to counter the fact that each pallet was assumed to be sand and could therefore be redistributed to meet any size requirement.

The flow for the remainder of this chapter shows analysis for 2009 in its entirety using the three models, subdivided by B-747 aircraft and then by C-17 aircraft. After the models are explained, a more detailed analysis for each week of the year is discussed. The final portion of each aircraft analysis displays graphs comparing the models to actual data from GATES.

B-747 Results (CONUS to Incirlik AB, Turkey)

All model inputs included a 42-pallet maximum for B-747 aircraft and a maximum pallet height of 96 inches. There were 502 actual B-747 missions flown in 2009 according to data from GATES. The following is a snapshot of the three models with a timeframe from 1 January 2009 to 31 December 2009, broken down by destination airfield.

Table 5. Model 1 snapshot. B-747 data for 1 Jan - 31 Dec 2009.

B747	Data	Model 1						
	Afghanistan	Locations:						
		AZ1	KBL	KDH	OA1	OA4	TE2	Total
Original	# Msns	84	0	103	1	1	2	**191**
	# Pallets	3519	0	4311	1	2	80	**7913**
	Avg Height	56.84	0.00	61.38	84.00	40.50	63.26	
	Avg Weight	3,478.40	0.00	3,961.34	2,330.00	3,255.00	2,059.19	
New	# Msns	50	0	66	1	1	2	**120**
	# Pallets	2,083.60	0.00	2,756.24	0.88	0.84	52.72	**4894.281**
	Avg Height	95.98	0.00	95.97	84.00	81.00	95.49	
	Avg Weight	5,873.55	0.00	6,194.17	2,330.00	6,510.00	3,108.21	
	Avg Wt/Inch	61.19	N/A	64.54	27.74	80.37	32.55	
	Avg Heaviest	5,874.67	N/A	6,195.88	2,662.86	7,715.56	3,124.79	
	Avg Lightest	3,549.28	N/A	1,484.43	2,330.00	6,510.00	2,245.94	
% Reduction in Missions:		40.48%	N/A	35.92%	0.00%	0.00%	0.00%	**37.17%**
% Reduction in Pallets:		40.79%	N/A	36.06%	12.50%	57.81%	34.10%	**38.15%**

Model 1 analyzed and redistributed all pallets in 2009. Of the pallets analyzed, some consumed more than one pallet position of space on the aircraft. These pallets were rounded to the next whole number. For example, if a single pallet consumed 1.3 pallet positions, it was rounded to two pallets under this model. Exactly 516 pallets consumed more than one pallet position and were rounded to 1,111. If all 7,913 pallets were "available" on 1 January 2009, 191 B-747 missions could have flown the cargo from CONUS locations to Incirlik AB. Redistributing the pallet loads to a 96 inch height would have reduced the total number of missions by 37 percent to a total of 120 B-747 missions. The 7,913 pallets would have reduced to 4,895, yielding a savings of 38 percent.

Table 6. Model 2 snapshot. B-747 data for 1 Jan - 31 Dec 2009.

B747	Data	Model 2						
	Afghanistan	Locations:						
		AZ1	KBL	KDH	OA1	OA4	TE2	Total
Original	# Msns	73	0	88	1	1	2	**165**
	# Pallets	3031	0	3688	1	2	80	**6802**
	Avg Height	62.57	0.00	67.49	84.00	40.50	63.26	
	Avg Weight	3,712.45	0.00	4,037.86	2,330.00	3,255.00	2,059.19	
New	# Msns	48	0	62	1	1	2	**114**
	# Pallets	1,975.51	0.00	2,592.59	0.88	0.84	52.72	**4622.542**
	Avg Height	95.98	0.00	95.98	84.00	81.00	95.49	
	Avg Weight	5,694.55	0.00	5,743.01	2,330.00	6,510.00	3,108.21	
	Avg Wt/Inch	59.33	N/A	59.83	27.74	80.37	32.55	
	Avg Heaviest	5,695.96	N/A	5,743.91	2,662.86	7,715.56	3,124.79	
	Avg Lightest	2,907.31	N/A	3,410.45	2,330.00	6,510.00	2,245.94	
% Reduction in Missions:		34.25%	N/A	29.55%	0.00%	0.00%	0.00%	**30.91%**
% Reduction in Pallets:		34.82%	N/A	29.70%	12.50%	57.81%	34.10%	**32.04%**
Supplemental		AZ1	KBL	KDH	OA1	OA4	TE2	Total
	# Msns	12	0	15	0	0	0	**27**
	# Pallets	488	0	623	0	0	0	**1111**
Model 2 + Supplemental		AZ1	KBL	KDH	OA1	OA4	TE2	Total
Original	# Msns	85	0	103	1	1	2	**192**
	# Pallets	3,519	0	4,311	1	2	80	**7913**
New	# Msns	60	0	77	1	1	2	**141**
	# Pallets	2,463.51	0.00	3,215.59	0.88	0.84	52.72	**5733.542**
% Reduction in Missions:		29.41%	N/A	25.24%	0.00%	0.00%	0.00%	**26.56%**
% Reduction in Pallets:		29.99%	N/A	25.41%	12.50%	57.81%	34.10%	**27.54%**

Model 2 only considered and redistributed pallets in 2009 which utilized exactly one pallet position. It would have taken 165 B-747 missions to transport the 6,802 pallets identified by this model. Redistributing the pallet loads to a 96 inch height would have reduced the total number of missions to 114 and total number of pallets to 4,623, saving approximately 31 and 32 percent, respectively. The supplemental portion incorporated all pallets not counted for redistribution under Model 2. The model redistribution for pallets and missions were added to the supplemental pallets and missions to provide an overall savings picture. Including supplemental information, a total of 141 B-747 aircraft would have transported 5,734 pallets. This would have reduced the number of overall missions by 26 percent and number of pallets by 27 percent.

Table 7. Model 3 snapshot. B-747 data for 1 Jan - 31 Dec 2009.

B747	Data	Model 3						
	Afghanistan	Locations:						
		AZ1	KBL	KDH	OA1	OA4	TE2	Total
Original	# Msns	54	0	70	1	1	2	**128**
	# Pallets	2232	0	2922	1	1	51	**5207**
	Avg Height	70.54	0.00	74.31	84.00	52.00	75.75	
	Avg Weight	3,963.93	0.00	4,278.22	2,330.00	3,540.00	2,513.82	
New	# Msns	40	0	54	1	1	1	**97**
	# Pallets	1,640.07	0.00	2,261.92	0.88	0.54	40.24	**3943.646**
	Avg Height	95.95	0.00	96.00	84.00	52.00	94.22	
	Avg Weight	5,391.52	0.00	5,526.51	2,330.00	3,540.00	3,126.95	
	Avg Wt/Inch	56.19	N/A	57.57	27.74	68.08	33.19	
	Avg Heaviest	5,394.57	N/A	5,526.71	2,662.86	6,535.38	3,186.04	
	Avg Lightest	393.35	N/A	5,066.15	2,330.00	3,540.00	763.32	
% Reduction in Missions:		25.93%	N/A	22.86%	0.00%	0.00%	50.00%	**24.22%**
% Reduction in Pallets:		26.52%	N/A	22.59%	12.50%	45.83%	21.10%	**24.26%**
Supplemental		AZ1	KBL	KDH	OA1	OA4	TE2	Total
	# Msns	31	0	34	0	1	1	**67**
	# Pallets	1287	0	1389	0	1	29	**2706**
Model 3 + Supplemental		AZ1	KBL	KDH	OA1	OA4	TE2	Total
Original	# Msns	85	0	104	1	2	3	**195**
	# Pallets	3,519	0	4,311	1	2	80	**7913**
New	# Msns	71	0	88	1	2	2	**164**
	# Pallets	2,927	0	3,651	1	2	69	**6649.646**
% Reduction in Missions:		16.47%	N/A	15.38%	0.00%	0.00%	33.33%	**15.90%**
% Reduction in Pallets:		16.82%	N/A	15.31%	12.50%	22.92%	13.45%	**15.97%**

Model 3 also used pallets that contained only one pallet position. In addition, only pallets greater than 48 inches tall were counted. For example, certain pieces of equipment may have been required to be carried on a single pallet with nothing else allowed on the pallet. The researcher assumed that pallets less than 48 inches tall would have been redistributed if feasible and the 48 inch discriminator was arbitrary. If all cargo were available on 1 January 2009, approximately 5,207 pallets would have been transported utilizing 128 missions. Redistributing this cargo would have reduced the total number of pallets to 3,944, and total missions to 97, saving approximately 24 percent on both accounts. When supplemental pallets were added to model totals, the overall number of pallets increased to 7,913, utilizing 195 missions. The actual reduction for comparison with other models was about 16 percent for both missions and pallets.

The information above provided a macro-level baseline of what each model analyzed with associated assumptions. Since all the cargo would never be available for transport on the first day of the year, the models were measured on a weekly basis, starting with 1 January 2009 and ending with 31 December 2009. Each of the 52 weeks of the year contained seven days, except the last week which was eight days. A different visual format was used with the same computations as the models above. Each of the weekly redistributed pallets was rounded up to the next whole number to more accurately describe reality. An example is detailed in Table 8 below. This rounding correction changed the total redistributed pallet savings by less than one percent across all three models. The entire analyzed data set is included in Appendices D - F. Streamlined results are presented for each model in the next three tables.

Table 8. Model 1 weekly analysis, 1 Jan - 31 Dec 2009, B-747 data.

2009 Summary (B-747)		AZ1	KDH	OA1	OA4	TE2	Total
Original	Missions	103	131	1	2	28	265
Redistributed	Missions	75	90	1	2	28	196
Reduction %	Missions	27.18%	31.30%	0.00%	0.00%	0.00%	26.04%
Original	Pallets	3519	4311	1	2	80	7913
Redistributed	Pallets	2,103.00	2,779.00	1.00	2.00	65.00	4950
Reduction %	Pallets	40.24%	35.54%	0.00%	0.0%	18.75%	37.44%
Corrected		AZ1	KDH	OA1	OA4	TE2	Total
Original	Missions	103	131	1	2	28	265
Redistributed	Missions	75	91	1	2	28	197
Reduction %	Missions	27.18%	30.53%	0.00%	0.00%	0.00%	25.66%
Original	Pallets	3519	4311	1	2	80	7913
Redistributed	Pallets	2103	2,796	1	2	65	4967
Reduction %	Pallets	40.24%	35.14%	0.00%	0.0%	18.75%	37.23%

Table 8 summarizes Model 1 for 2009. The pallets that were originally shipped during one of the 52 weeks were assumed to be ready for transport on the first day of the week. Using this model, the same 7,913 pallets were reduced to 4,950 pallets. These numbers are greater than the annual view of Model 1 above due to rounding the number of pallets on a weekly basis instead of an annual basis. For example, assume the number of redistributed pallets for a location equaled 1.1 each week of the year. The total redistributed number of pallets for the year would equal 57.2 pallets (52 weeks * 1.1 redistributed pallets). In fact, 1.1 redistributed pallets would consume 2 pallet positions, so a more accurate weekly view of the redistributed pallets would be 104 pallets (52 weeks * 2 pallet positions) for the year. It was important to round up redistributed pallet positions on a weekly basis to determine the actual number of missions required to deliver the cargo.

The number of missions also was not the same as the annual view and the model identified a problem with the redistribution. With pallet availability scattered throughout the year in the weekly format, the original number of missions jumped to 265 and was redistributed to 196, showing a 26 percent reduction in overall missions.

The problem with the redistribution occurred over the middle two weeks in April 2009 (9-22 April). Each model was programmed to identify when the 10,000 pound pallet limit was exceeded during redistribution. The average pallet weight during the 9-15 April timeframe was 12,598 pounds, and 10,583 pounds for the 16-22 April timeframe. The researcher manually entered a new maximum pallet height to account for the discrepancies and reduce the average pallet weight to less than 10,000 pounds. The first week required a maximum height restriction of 91 inches, increasing the number of missions by one and number of pallets by five. The second week required a maximum height restriction of 76 inches, with an increase of 12 pallets and no increase in the number of missions. The second part of Table 8 represents the corrected numbers.

Table 9. Model 2 weekly analysis, 1 Jan - 31 Dec 2009, B-747 data.

2009 Summary (B-747)		AZ1	KDH	OA1	OA4	TE2	Total
Original	Missions	93	113	1	2	28	237
Redistributed	Missions	72	87	1	2	28	190
Supplemental	Missions	29	40	0	0	0	69
Reduction %	Missions	17.21%	16.99%	0.00%	0.00%	0.00%	15.36%
Original	Pallets	3031	3688	1	2	80	6802
Redistributed	Pallets	1,996	2,613	1	2	65	4677
Supplemental	Pallets	488	623	0	0	0	1111
Reduction %	Pallets	29.41%	24.94%	0.00%	0.00%	18.75%	26.85%

Table 9 summarizes Model 2 for 2009. After rounding-up total pallets on a weekly basis, the total pallet redistribution dropped to 31 percent (not shown). The total number of missions was calculated at 237 and redistributed to 190, yielding a 20 percent (not shown above) reduction in missions. No limits were exceeded using this model.

For consistency across all three models, the remaining 1,111 supplemental pallets which were not redistributed in this model would have filled 69 B-747 aircraft. When the supplemental

pallets were added to the redistribution of Model 2, the savings dropped to approximately 15

percent for missions and 27 percent for pallets.

Table 10. Model 3 weekly analysis, 1 Jan - 31 Dec 2009, B-747 data.

2009 Summary (B-747)		AZ1	KDH	OA1	OA4	TE2	Total
Original	Missions	78	92	1	1	21	193
Redistributed	Missions	67	78	1	1	21	168
Supplemental	Missions	57	60	0	1	18	136
Reduction %	Missions	8.15%	9.21%	0.00%	0.00%	0.00%	7.60%
Original	Pallets	2232	2922	1	1	51	5207
Redistributed	Pallets	1,659	2,291	1	1	50	4002
Supplemental	Pallets	1,287	1,389	0	1	29	2706
Reduction %	Pallets	16.28%	14.64%	0.00%	0.0%	1.25%	15.23%

Table 10 summarizes Model 3 for 2009. Weekly pallet redistribution dropped to 23

percent (not shown). The number of missions computed on a weekly basis totaled 193 originally

and reduced to 168 after the redistribution, realizing a 13 percent reduction (not shown). No

limits were exceeded using this model.

Supplemental information for this model included all B-747 pallets that were less than or

equal to 48 inches in height or greater than 48 inches while consuming more than one pallet

position. Pallets meeting the supplemental criteria were not redistributed and would have filled

approximately 136 B-747 aircraft. Considering the supplemental pallets with Model 3, the total

savings for both pallets and missions was reduced to approximately seven percent for missions

and 15 percent for pallets.

The following graphs compare overall numbers for a 52-week period in a graphical

format. The "Actual" line shows the actual number of missions flown according to GATES.

The "Modeled" line computed missions from the number of pallets as explained previously. The

"Redistributed" line included redistributed model data and supplemental data for Models 2 and 3

to normalize the comparison between models.

Figure 5. B-747 pallets per week, not redistributed.

Figure 5 shows the number of pallets transported on B-747 aircraft per week from any CONUS location to Incirlik AB, Turkey. Each airfield is shown with the total in blue (747 Total). This figure shows general trend information only. None of the data contains redistributed pallet information.
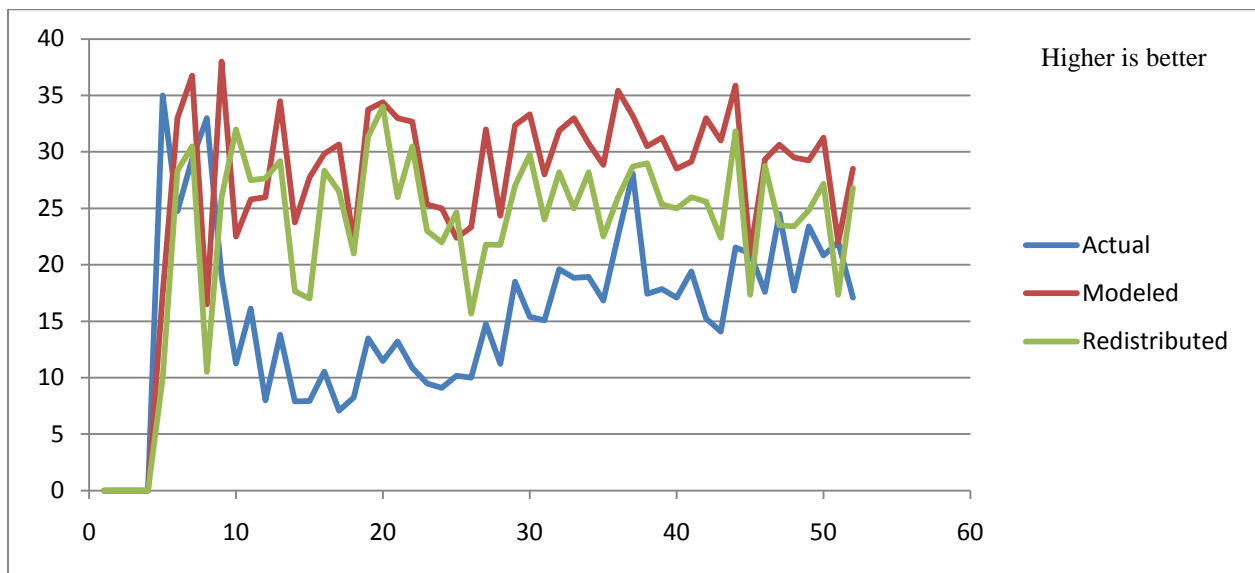
Figure 6. B-747 average pallets per mission, Model 1 only.

Figure 6 compares the average number of pallets flown on each B-747 mission to Model 1. The actual line indicates the number of missions actually flown in 2009. Model 1 computed

the number of missions based on the number of pallets available for the week. For example, if

50 pallets were flown during a particular week, the actual number of missions flown might be

four, while the modeled number of missions flown would be two. Since each B-747 can carry 42

pallets, Model 1 assumed the first aircraft would carry the first 42 pallets and the second aircraft

would transport the remaining eight pallets. In other words, the modeled line shows the

optimized number of aircraft based on the actual number of pallets available each week. The

redistributed line shows the average pallets per mission after Model 1 redistributed the pallets to

the new maximum height of 96 inches. Although the redistributed line is lower than the modeled

line, the overall number of missions and pallets showed a significant decrease.

Figure 7. B-747 average pallets per mission, all models, redistributed.

Figure 7 compared average pallets flown per mission across all three model

redistributions to the actual number of missions flown in 2009. As previously discussed in this

chapter, each redistribution model was sub-optimized by pallet destination in Afghanistan.
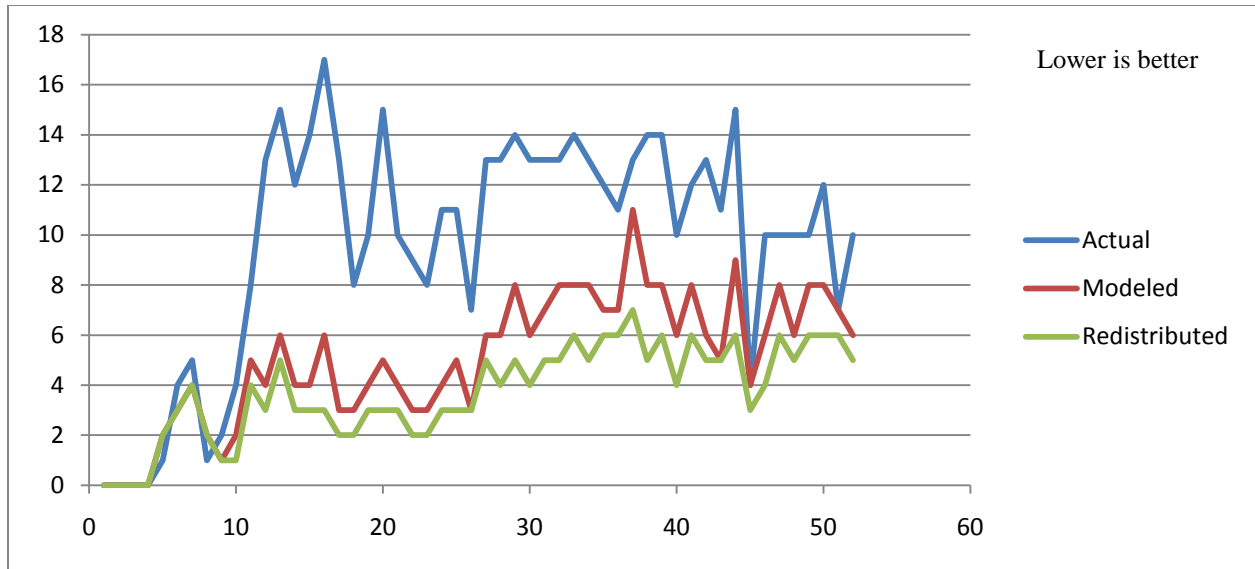
Figure 8. B-747 actual and projected missions per week, Model 1 only.

Figure 8 shows the actual and projected number of missions per week for the B-747 compared to Model 1 only. The 37 percent reduction in missions reported by Model 1 was based on the red "Modeled" line compared to the green "Redistributed" line.
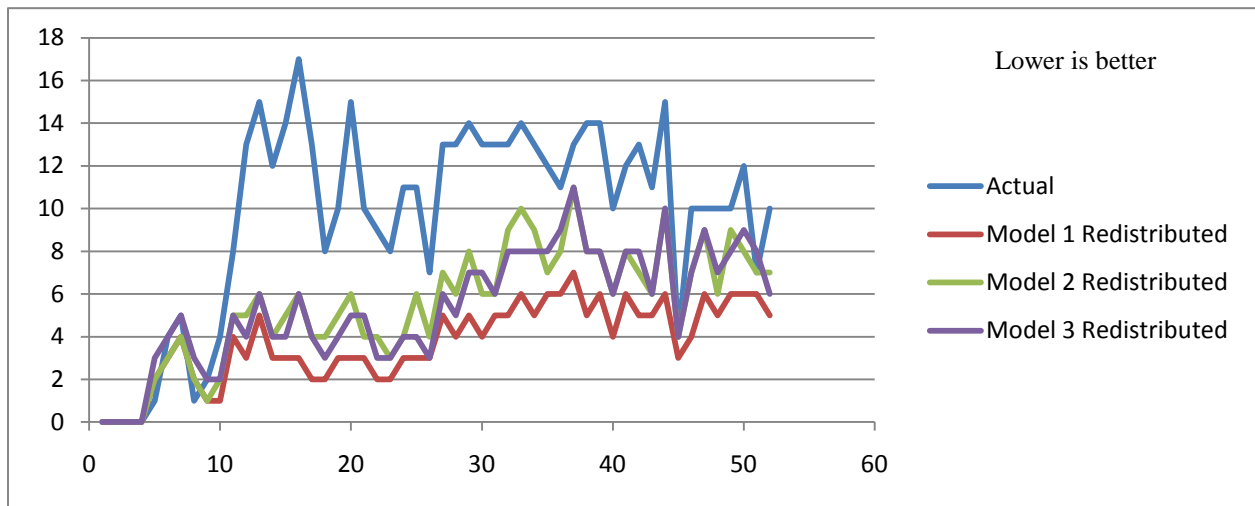
Figure 9. B-747 actual and projected missions per week, all models, redistributed.

Figure 9 compared the actual missions per week for 2009 against each model's redistributed number of missions per week. As expected, each model significantly reduced the number of missions throughout the year, even with location sub-optimization.

C-17 Results (Incirlik AB, Turkey to Afghanistan)

All model inputs included an 18-pallet maximum for C-17 aircraft and a maximum pallet height of 96 inches. There were 593 actual C-17 missions flown in 2009 with data from GATES. The following is a snapshot of the three models with a timeframe from 1 January 2009 to 31 December 2009, broken down by destination airfield.

Table 11. Model 1 snapshot. C-17 data for 1 Jan - 31 Dec 2009.

C17	Data	Model 1						
	Afghanistan	Locations:						
		AZ1	KBL	KDH	OA1	OA4	TE2	Total
Original	# Msns	232	0	285	2	1	6	**526**
	# Pallets	4175	0	5125	21	1	102	**9424**
	Avg Height	55.37	0.00	59.29	54.67	29.00	57.19	
	Avg Weight	3,399.06	0.00	3,832.26	5,156.71	2,970.00	2,053.14	
New	# Msns	134	0	176	1	1	4	**316**
	# Pallets	2,408.23	0.00	3,165.07	11.96	0.30	60.76	**5646.323**
	Avg Height	95.97	0.00	95.97	95.67	29.00	95.62	
	Avg Weight	5,890.87	0.00	6,203.51	9,024.25	2,970.00	3,433.11	
	Avg Wt/Inch	61.38	N/A	64.64	94.33	102.41	35.90	
	Avg Heaviest	5,892.75	N/A	6,205.33	9,055.69	9,831.72	3,446.65	
	Avg Lightest	1,350.42	N/A	452.47	8,678.37	2,970.00	2,620.89	
% Reduction in Missions:		42.24%	N/A	38.25%	50.00%	0.00%	33.33%	**39.92%**
% Reduction in Pallets:		42.32%	N/A	38.24%	43.06%	69.79%	40.43%	**40.09%**

Model 1 analyzed and redistributed all pallets in 2009. Of the pallets analyzed, some consumed more than one pallet position of space on the aircraft. These pallets were rounded to the next whole number. For example, if a single pallet consumed 1.3 pallet positions, it was rounded to two pallets under this model. Approximately 777 pallets consumed more than one pallet position and were rounded to 1,745. Of the 9,424 pallets "available" on 1 January, 526 missions could have flown the cargo to their destinations in Afghanistan. Redistributing the pallet loads to a 96 inch height would have reduced the number of missions by 40 percent to a total of 316 missions. The 9,424 pallets would have reduced to 5,647, also yielding a savings of

40 percent. When compared to actual missions flown, Model 1 reduced total missions by 46 percent.

Table 12. Model 2 snapshot. C-17 data for 1 Jan - 31 Dec 2009.

C17	Data	Model 2						
	Afghanistan	Locations:						
		AZ1	KBL	KDH	OA1	OA4	TE2	Total
Original	# Msns	189	0	232	2	1	6	**430**
	# Pallets	3391	0	4175	21	1	91	**7679**
	Avg Height	62.40	0.00	66.86	54.67	29.00	62.69	
	Avg Weight	3,645.72	0.00	3,955.78	5,156.71	2,970.00	2,164.07	
New	# Msns	123	0	162	1	1	4	**291**
	# Pallets	2,204.05	0.00	2,907.55	11.96	0.30	59.43	**5183.292**
	Avg Height	95.96	0.00	95.99	95.67	29.00	95.08	
	Avg Weight	5,606.64	0.00	5,679.30	9,024.25	2,970.00	3,282.17	
	Avg Wt/Inch	67.07	N/A	70.36	94.33	102.41	36.71	
	Avg Heaviest	6,438.64	N/A	6,754.93	9,055.69	9,831.72	3,523.98	
	Avg Lightest	335.35	N/A	3,729.29	8,678.37	2,970.00	1,505.03	
% Reduction in Missions:		34.92%	N/A	30.17%	50.00%	0.00%	33.33%	**32.33%**
% Reduction in Pallets:		35.00%	N/A	30.36%	43.06%	69.79%	34.70%	**32.50%**
Supplemental		**AZ1**	**KBL**	**KDH**	**OA1**	**OA4**	**TE2**	**Total**
	# Msns	44	0	53	0	0	1	**98**
	# Pallets	784	0	950	0	0	11	**1745**
Supplemental		**AZ1**	**KBL**	**KDH**	**OA1**	**OA4**	**TE2**	**Total**
Original	# Msns	233	0	285	2	1	7	**528**
	# Pallets	4,175.00	0.00	5,125.00	21.00	1.00	102.00	**9424**
New	# Msns	167	0	215	1	1	5	**389**
	# Pallets	2,988.05	0.00	3,857.55	11.96	0.30	70.43	**6928.292**
% Reduction in Missions:		28.33%	N/A	24.56%	50.00%	0.00%	28.57%	**26.33%**
% Reduction in Pallets:		28.43%	N/A	24.73%	43.06%	69.79%	30.95%	**26.48%**

Model 2 only considered and redistributed pallets in 2009 which utilized exactly one pallet position. It would have taken 430 C-17 missions to transport the 7,679 pallets identified by this model. Redistributing the pallet loads to a 96 inch height would have reduced the total number of missions to 291 and total number of pallets to 5,184, saving approximately 32 percent each.

The supplemental portion incorporated the remaining 1,745 pallets not counted for redistribution under Model 2. Adding the supplemental pallets to the Model 2's redistribution

changed the savings to 26 percent for both pallets and missions. When compared to actual missions flown, Model 2 reduced total missions by 34 percent.

Table 13. Model 3 snapshot. C-17 data for 1 Jan - 31 Dec 2009.

C17	Data	Model 3						
	Afghanistan	**Locations:**						
		AZ1	**KBL**	**KDH**	**OA1**	**OA4**	**TE2**	**Total**
Original	# Msns	139	0	183	1	0	4	**327**
	# Pallets	2485	0	3286	10	0	57	**5838**
	Avg Height	70.37	0.00	73.78	74.20	0.00	75.12	
	Avg Weight	3,896.06	0.00	4,200.34	4,326.20	0.00	2,590.44	
New	# Msns	102	0	141	1	0	3	**247**
	# Pallets	1,821.54	0.00	2,525.28	7.73	0.00	44.60	**4399.156**
	Avg Height	95.98	0.00	95.97	92.75	0.00	95.16	
	Avg Weight	5,313.78	0.00	5,464.10	5,407.75	0.00	3,281.22	
	Avg Wt/Inch	81.15	N/A	81.02	145.94	N/A	48.91	
	Avg Heaviest	7,790.71	N/A	7,777.48	14,010.70	N/A	4,695.08	
	Avg Lightest	4,219.97	N/A	2,187.42	10,216.13	N/A	2,836.61	
% Reduction in Missions:		26.62%	N/A	22.95%	0.00%	N/A	25.00%	**24.46%**
% Reduction in Pallets:		26.70%	N/A	23.15%	22.71%	N/A	21.75%	**24.65%**
Supplemental		**AZ1**	**KBL**	**KDH**	**OA1**	**OA4**	**TE2**	**Total**
	# Msns	94	0	103	1	1	3	**202**
	# Pallets	1690	0	1839	11	1	45	**3586**
Model 3 + Supplemental		**AZ1**	**KBL**	**KDH**	**OA1**	**OA4**	**TE2**	**Total**
Original	# Msns	233	0	286	2	1	7	**529**
	# Pallets	4,175.00	0.00	5,125.00	21.00	1.00	102.00	**9424**
New	# Msns	196	0	244	2	1	6	**449**
	# Pallets	3,511.54	0.00	4,364.28	18.73	1.00	89.60	**7985.156**
% Reduction in Missions:		15.88%	N/A	14.69%	0.00%	0.00%	14.29%	**15.12%**
% Reduction in Pallets:		15.89%	N/A	14.84%	10.81%	0.00%	12.15%	**15.27%**

Model 3 also used pallets that contained only one pallet position. In addition, only pallets greater than 48 inches tall were counted in this model. For example, certain pieces of equipment are required to be carried on a single pallet without allowing additional cargo. The researcher assumed that pallets less than 48 inches tall would have been redistributed if feasible and the 48 inch discriminator was arbitrary. Assuming full cargo availability on 1 January 2009, approximately 5,838 pallets would have been transported utilizing 327 missions. Redistributing this cargo would have reduced the total number of pallets to 4,400, and total missions to 247,

saving approximately 24 percent in both areas. When supplemental pallets were added to model

totals, the reduction was about 15 percent for both missions and pallets. When compared to

actual missions flown, Model 3 reduced total missions by 24 percent.

The information above provided a macro-level baseline of what each model analyzed and

the associated assumptions. Since all the cargo would never be available for transport on the

first day of the year, the models were measured on a weekly basis, starting with 1 January 2009

and ending with 31 December 2009. Each of the 52 weeks of the year contained seven days,

except the last week which was eight days. A different visual format was used with the same

instructions as the models above. Each of the weekly redistributed pallets was rounded up to the

next whole number to more accurately describe reality. An example is detailed under Table 14

below. This rounding correction changed the total redistributed pallet savings by less than one

percent across all three models. The entire analyzed data set is included in Appendices G - I.

Streamlined results are presented for each model in the next three tables.

Table 14. Model 1 weekly analysis, 1 Jan - 31 Dec 2009, C-17 data.

2009 Summary (C-17)		AZ1	KDH	OA1	OA4	TE2	Total
Original	Missions	251	304	4	1	25	585
Redistributed	Missions	157	195	4	1	25	382
Reduction %	Missions	37.45%	35.86%	0.00%	0.00%	0.00%	34.70%
Original	Pallets	4175	5125	21	1	102	9424
Redistributed	Pallets	2,430	3,186	13	1	73	5703
Reduction %	Pallets	41.80%	37.83%	38.10%	0.00%	28.43%	39.48%
Corrected		AZ1	KDH	OA1	OA4	TE2	Total
Original	Missions	251	304	4	1	25	585
Redistributed	Missions	157	197	4	1	25	384
Reduction %	Missions	37.45%	35.20%	0.00%	0.00%	0.00%	34.36%
Original	Pallets	4175	5125	21	1	102	9424
Redistributed	Pallets	2,431	3,198	15	1	73	5718
Reduction %	Pallets	41.77%	37.60%	28.57%	0.00%	28.43%	39.33%

Table 14 summarizes Model 1 for 2009. The pallets that were originally shipped during one of the 52 weeks were assumed to be ready for transport on the first day of the week. Using this model, the same 9,424 pallets were reduced to 5,703. These numbers are greater than the annual view of Model 1 above due to rounding the number of pallets on a weekly basis instead of an annual basis. For example, assume the number of redistributed pallets for a location equaled 1.1 each week of the year. The total redistributed number of pallets for the year would equal 57.2 pallets (52 weeks * 1.1 redistributed pallets). In fact, 1.1 redistributed pallets would consume 2 pallet positions, so a more accurate weekly view of the redistributed pallets would be 104 pallets (52 weeks * 2 pallet positions) for the year. It was important to round up redistributed pallet positions on a weekly basis to determine the actual number of missions required to deliver the cargo.

The number of missions also was not the same as the annual view and the model identified multiple problems with the redistribution. With pallet availability scattered throughout the year in this weekly format, the original number of missions increased from 526 to 585 and was redistributed to 382, showing a 34 percent reduction in overall missions.

The redistribution problems occurred during week eight (19-25 April) at AZ1 (Bastion), weeks 15 and 17 (9-15 Apr & 23-29 Apr) at KDH (Kandahar), and week three (15-21 Jan) at OA1 (Bagram). In each case, the 10,000 pound structural pallet limit was exceeded during the redistribution. The researcher manually entered a new maximum pallet height to account for the discrepancies and reduce the average pallet weight to align with the structural constraint. AZ1 required a 92 inch height restriction for week eight, KDH required 83 and 93 inch restrictions for their respective weeks, and OA1 required a height restriction of 75 inches. The corrected information is shown in the bottom part of Table 14 above.

Table 15. Model 2 weekly analysis, 1 Jan - 31 Dec 2009, C-17 data.

2009 Summary (C-17)		AZ1	KDH	OA1	OA4	TE2	Total
Original	Missions	209	255	4	1	25	494
Redistributed	Missions	144	183	4	1	25	357
Supplemental	Missions	58	73	0	0	3	134
Reduction %	Missions	24.34%	21.95%	0.00%	0.00%	0.00%	21.82%
Original	Pallets	3391	4175	21	1	91	7679
Redistributed	Pallets	2,227	2,932	13	1	72	5,425
Supplemental	Pallets	784	950	0	0	11	1,745
Reduction %	Pallets	27.88%	24.25%	38.10%	0.00%	18.63%	25.83%

Corrected		AZ1	KDH	OA1	OA4	TE2	Total
Original	Missions	209	255	4	1	25	494
Redistributed	Missions	144	183	4	1	25	357
Supplemental	Missions	58	73	0	0	3	134
Reduction %	Missions	24.34%	21.95%	0.00%	0.00%	0.00%	21.82%
Original	Pallets	3391	4175	21	1	91	7679
Redistributed	Pallets	2,228	2,932	15	1	72	5248
Supplemental	Pallets	784	950	0	0	11	1,745
Reduction %	Pallets	27.86%	24.25%	31.76%	0.00%	18.63%	25.80%

Table 15 summarizes Model 2 for 2009. After rounding-up total pallets on a weekly basis, the total pallet redistribution dropped to 31 percent (not shown). The total number of missions was calculated at 494 and redistributed to 357, yielding a 27 percent reduction in missions (not shown). Two structural limits were exceeded in this model. Week eight for Bastion and week three for Bagram produced the same results as the previous model. The corrected information is shown in the second chart of Table 15.

For consistency across all three models, the remaining 1,745 supplemental pallets which were not redistributed in this model would have filled 134 C-17 aircraft. When the supplemental pallets were added to the redistribution of Model 2, the savings dropped to approximately 22 percent for missions and 26 percent for pallets.

Table 16. Model 3 weekly analysis, 1 Jan - 31 Dec 2009, C-17 data.

2009 Summary (C-17)		AZ1	KDH	OA1	OA4	TE2	Total
Original	Missions	160	203	4	0	19	386
Redistributed	Missions	127	165	4	0	19	315
Supplemental	Missions	113	126	1	1	20	261
Reduction %	Missions	12.09%	11.55%	0.00%	0.00%	0.00%	10.97%
Original	Pallets	2485	3286	10	0	57	5838
Redistributed	Pallets	1,841	2,552	9	0.00	54	4456
Supplemental	Pallets	1,690	1,839	11	1	45	3586
Reduction %	Pallets	15.43%	14.32%	4.76%	0.00%	2.94%	14.66%

Corrected		AZ1	KDH	OA1	OA4	TE2	Total
Original	Missions	160	203	4	0	19	386
Redistributed	Missions	127	165	4	0	19	315
Supplemental	Missions	113	126	1	1	20	261
Reduction %	Missions	12.09%	11.55%	0.00%	0.00%	0.00%	10.97%
Original	Pallets	2485	3286	10	0	57	5838
Redistributed	Pallets	1,842	2,552	9	0	54	4457
Supplemental	Pallets	1,690	1,839	11	1	45	3586
Reduction %	Pallets	15.40%	14.32%	4.76%	0.00%	2.94%	14.65%

Table 16 summarizes Model 3 for 2009. Weekly pallet redistribution dropped to 23 percent (not shown). The number of missions computed on a weekly basis totaled 386 originally and reduced to 315 after the redistribution, realizing an 18 percent reduction (not shown). Pallets were redistributed from 5,838 to 4,456, with a 24 percent reduction (not shown). The structural pallet limit was exceeded one time in this model during week eight and the researcher applied the same correction as the previous two models.

Supplemental pallets were calculated in the same manner as Model 2 with the additional 48 inch restriction, and were added to the final redistribution numbers for Model 3. All pallets meeting the supplemental criteria were not redistributed and would have filled approximately 261 C-17 aircraft. Considering the supplemental pallets with Model 3, the total savings for both pallets and missions was reduced to approximately 11 percent for missions and 15 percent for pallets.

The following figures compare overall numbers for a 52-week period in a graphical format. The "Actual" line shows the actual number of missions flown according to GATES. The "Modeled" line computed missions from the number of pallets as explained previously. The "Redistributed" line included redistributed model data and supplemental data for Models 2 and 3 to normalize the comparison between models.
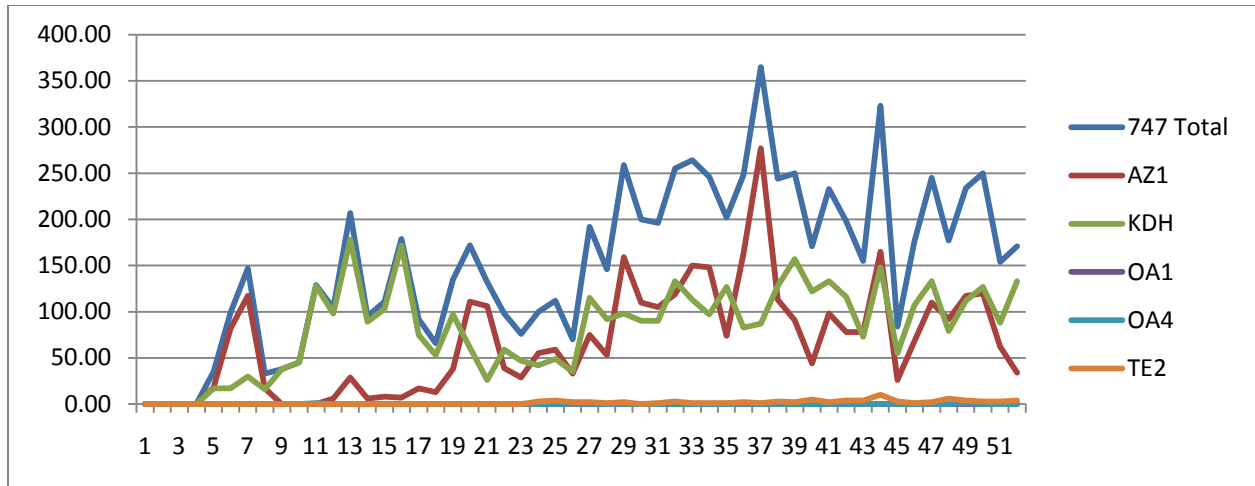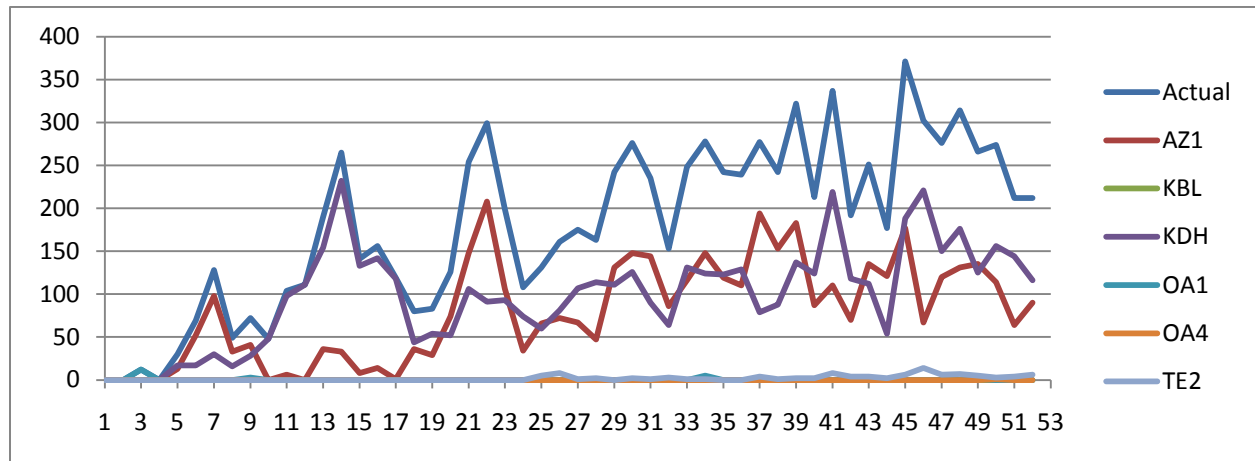

Figure 10. C-17 pallets per week, not redistributed.

Figure 10 shows the number of pallets transported on C-17 aircraft per week from Incirlik AB, Turkey to each of the six airfield destinations in Afghanistan. Each airfield is shown with the total in blue. This figure shows general trend information only and no redistributed pallet information.
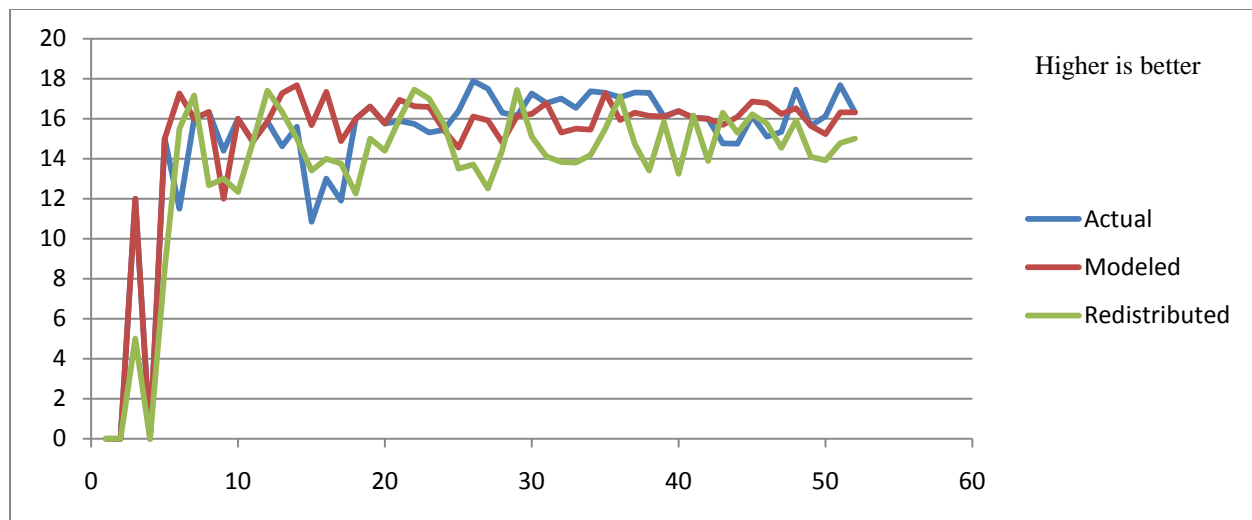
Figure 11. C-17 pallets per mission, Model 1 only.

Figure 11 compares the average number of pallets flown on each C-17 mission to Model 1. The actual line indicates the number of missions actually flown in 2009. Model 1 computed the number of missions based on the number of pallets available for the week. For example, if 25 pallets were flown during a particular week, the actual number of missions flown might be four, while the modeled number of missions flown would be two. Since each C-17 carried 18 pallets, Model 1 assumed the first aircraft would carry the first 18 pallets and the second aircraft would transport the remaining seven pallets. In other words, the modeled line shows the optimized number of aircraft based on the actual number of pallets available each week. The redistributed line shows the average pallets per mission after Model 1 redistributed the pallets to the new maximum height of 96 inches. Although the redistributed line is lower than the modeled and actual lines, the overall number of missions and pallets showed a significant decrease.
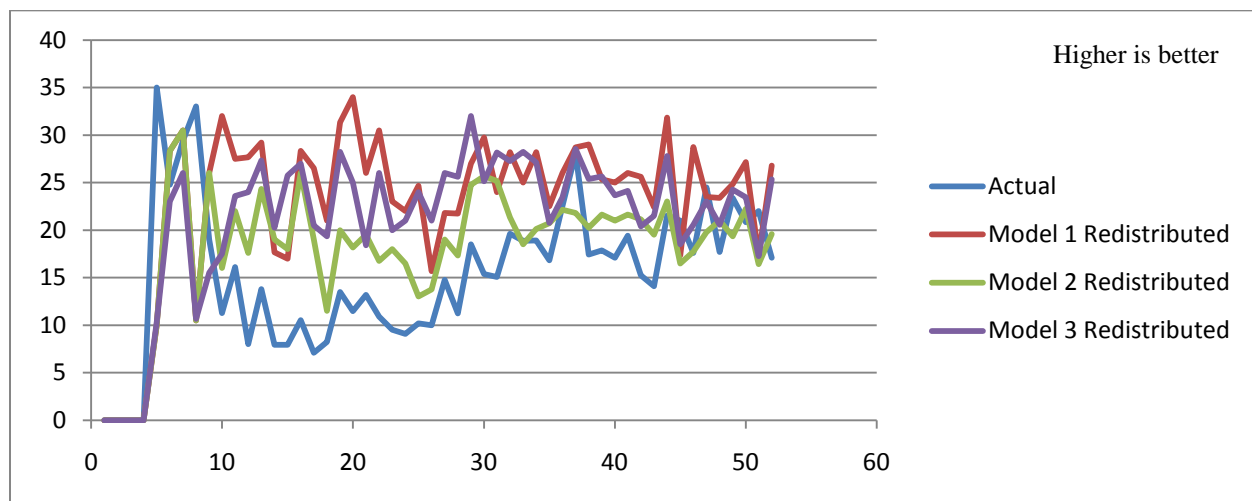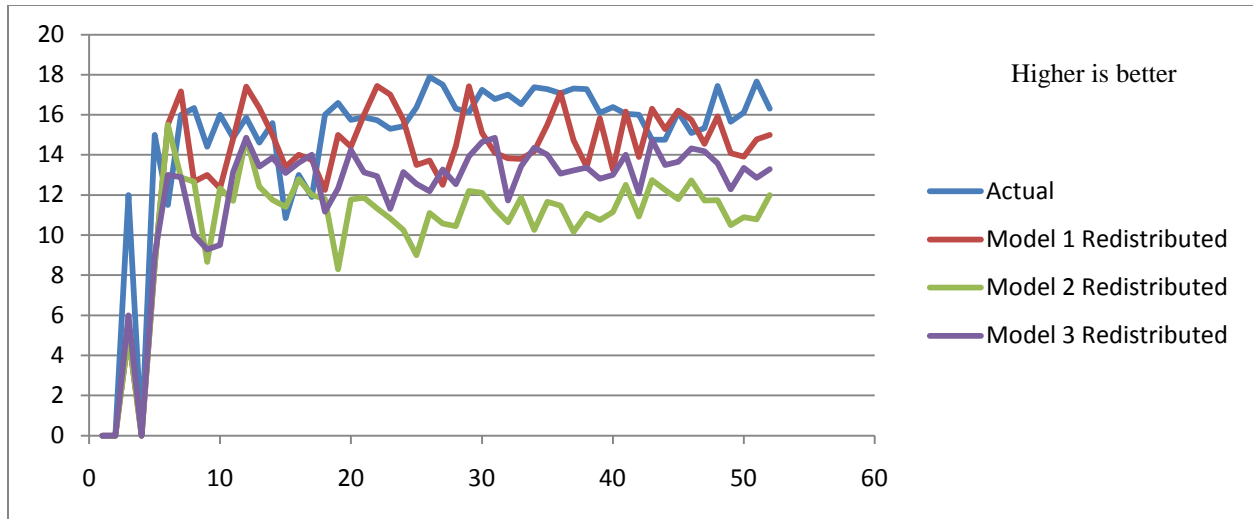
Figure 12. C-17 average pallets per mission, all models, redistributed.

Figure 12 compares the average pallets flown per mission across all three model redistributions to the actual number of missions flown in 2009. Although the actual line shows very good utilization overall, redistributing pallets significantly reduced the overall required number of pallets and missions. As previously discussed in this chapter, each redistribution model was sub-optimized by pallet destination in Afghanistan.
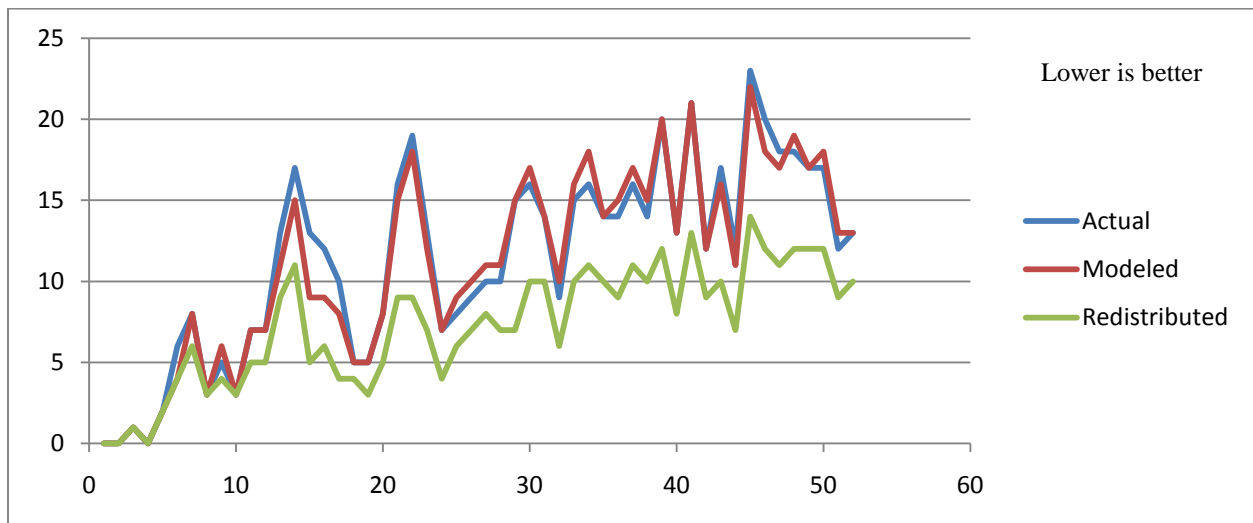
Figure 13. C-17 actual and projected missions per week, Model 1 only.

Figure 13 shows the actual and projected number of missions per week for the C-17 compared to Model 1 only. The 40 percent reduction in missions reported by Model 1 is based on the red Modeled line compared to the green Redistributed line. However, changing the pallet height restriction to 96 inches provided a significant overall savings to the number of missions flown throughout the year. Once again, comparing the redistributed line with the actual line reduced overall missions by 46 percent.
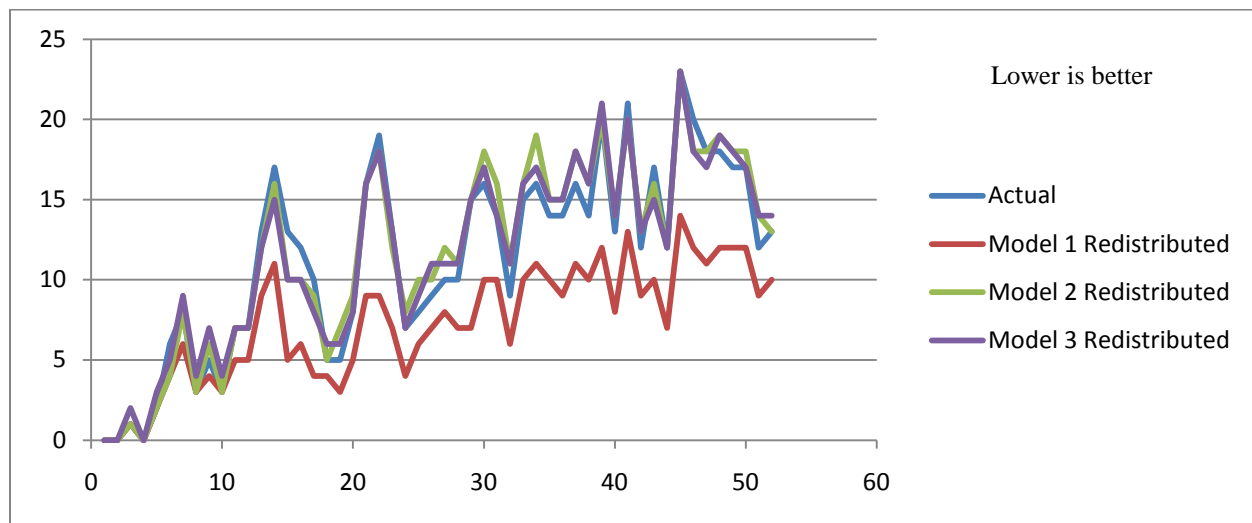
Figure 14. C-17 actual and projected missions per week, all models, redistributed.

Figure 14 compared the actual missions per week for 2009 against each model's redistributed number of missions per week. Although the actual number of missions closely resembled the redistributed models, the overall number of pallets decreased by 39 percent, 26 percent, and 14 percent for each model, respectively. Thus, significant savings can be achieved by increasing the pallet height to 96 inches.

Concluding Remarks

This chapter outlined various ways to compute pallet redistribution based on three models. Each model was more restrictive and less efficient than its predecessor, and contained fewer overall pallets. Supplemental information was added to the redistributions for Models 2

and 3 for comparison across all models. Each model was relatively conservative based on the assumptions outlined in Chapter III. When compared with actual missions flown, the information provided by these models showed that substantial savings well above predictions could be achieved with the increased height requirements.

V. Conclusions and Recommendations

The previous chapter analyzed and evaluated results of increasing cargo pallet heights on B-747 and C-17 aircraft. This chapter addresses applications for this research, how the assumptions affect actual results, areas for further research, and concluding remarks.

Applications for this Research

As AMC continues to struggle with limited aircraft resources and downrange MOG issues in Afghanistan, it is imperative to find more efficient ways of operating. The bottlenecks in AMC's supply chain appear to be port hold times at enroute locations such as Incirlik AB, Turkey, and limited opportunities to deliver cargo to the warfighter in remote areas of Afghanistan such as Bastion airfield. By increasing the pallet height restriction from 72 to 96 inches and efficiently utilizing available aircraft, AMC can reduce the number of pallets and missions by 8 to 39 percent across the board for Afghanistan palletized cargo. Fewer aircraft carrying the same amount of cargo will result in higher efficiency and effectiveness to remote Afghanistan locations like Bastion and decrease overall cargo transit time.

Furthermore, fewer overall pallets means less pallet storage at enroute locations. A smaller pallet inventory helps to streamline processing time at enroute aerial ports and less aircraft are required to empty the port. Finally, increased aircraft weights will have a minimal impact on aircraft enroute flight time when compared to the typical multi-day holdover from backlogs at overseas aerial ports.

How Assumptions Affect Reality

Several assumptions were outlined in Chapters III and IV of this document. Unfortunately, assumptions can completely undermine a research project. Therefore, the researcher built conservative metrics into the models in order to more closely emulate reality. The critical assumption for this research was for the contents of each pallet to contain sand. Since actual pallet contents were not documented, there was no way to determine what cargo could be stacked or redistributed to increase pallet efficiency. The sand assumption allowed complete flexibility to redistribute cargo contents into any shape or size.

Another critical assumption dealt with cargo availability. By choosing one week increments, each model assumed the cargo transported during the week was available on the first day of that week. For example, assume three B-747 aircraft transported cargo during a particular week. If the first departed on the first day of the week with 30 pallets, the second departed on day three with 30 pallets, and the final departed on day six with 20 pallets, the models did not account for the five day lapse in cargo availability. Each model assumed the same 80 pallets were available on the first day of the week and two B-747s could transport the cargo. Perhaps the best way to account for cargo availability would have been to run each model for a one day period instead of a one week period. A one day period would have provided a more realistic picture for pallet redistribution in reality, but would have been overly complicated to track and analyze and likely would not have yielded results much different than the one week results.

The two main areas used to counteract the sand and cargo availability assumptions were sub-optimization of the cargo by location and not considering pallet length or width with the redistribution calculations. Each model subdivided pallets by destination in Afghanistan and computed required mission numbers based on each location's pallet distribution. In other words,

cargo destined for different locations in Afghanistan was not mixed on aircraft. For example,

assume 100 pallets were transported over a particular week. Also assume that one pallet each

was destined for five of the six locations in Afghanistan and the remaining 95 pallets were

scheduled for the sixth location. In this case, each model would have generated a mission for the

five single-pallet locations and either three B-747s (95 pallets divided by 42 pallets per aircraft)

or six C-17s (95 pallets divided by 18 pallets per aircraft) for the remaining cargo. In reality, the

same 100 pallets would have been transported on three B-747 aircraft to Incirlik AB. These

same results are not realized as easily on C-17 aircraft because the number of stops in

Afghanistan from a single C-17 is limited by crew duty day.

Finally, the models only redistributed cargo in terms of height and did not consider length

or width. For example, if several pallets contained a single box measuring 12 inches wide by 12

inches deep by 72 inches tall, only 24 inches of usable space would have been redistributed. In

reality, a majority of space on the pallet would have been usable for stacking additional cargo.

Although this scenario would have been obvious to the individuals packing the pallet, it

emphasizes another conservative measure to bring the research closer to reality.

Areas for Further Research

This research focused on a small part of AMC's global supply chain--increasing the cargo

throughput or minimizing the aircraft footprint, depending on how you look at the problem.

There are a multitude of other areas of research to maximize both efficiency and effectiveness to

customers, namely the Combatant Commands. The following suggestions for further research

only scratch the surface of potential ideas.

1. Physically watch and record operations at a military aerial port. GATES information is only as good as the user entering the data. It would be beneficial to spend a week or two at an aerial port such as Dover AFB or McGuire AFB to determine how pallets are built, the potential to combine or stack cargo, and validate GATES data for the observed cargo. This level of research would provide insight to the efficiencies of cargo processing both for military and commercial DoD airlift requirements.

2. Study the macro level view of the military supply chain from a customer at an overseas location ordering equipment through the fulfillment process and pallet buildup at the Defense Logistics Agency (DLA) in Susquehanna, PA, all the way through transportation to an aerial port, and finally delivery to the customer. Although this is an enormous undertaking, it would quickly provide insight into all the bottleneck areas of the military supply chain from the ordering process to wait time at DLA, aerial ports, enroute locations, and the final destination before the cargo is picked up by the customer. A closer look at the actual process from "cradle to grave" would be beneficial to AMC, USTRANSCOM, and the end users of the military supply chain system.

3. Look at the effects of overall cargo inventory at both enroute overseas aerial ports and CONUS aerial ports. What port inventory level provides the most flexibility while maintaining a high level of efficiency? Is it necessary to have a large storage yard such as the port at Dover AFB, or is it better to have almost no storage capability with almost exclusive enroute traffic like McGuire AFB's port? In general terms, does a port cycle more cargo through when it is at 80 percent capacity than when it is at 20 percent capacity? These questions might be unique to each port based on the mission, airlift traffic, and pallet storage capacity. However, they would

provide a unique insight into some of the bottleneck problems AMC routinely sees at enroute locations like Incirlik AB, Turkey.

Concluding Remarks

AMC has been criticized for not being as efficient as its commercial counterparts such as FedEx and UPS. While there is some merit in that criticism, neither FedEx nor UPS deliver up-armored Humvees to a dirt landing strip in the middle of nowhere, Afghanistan. The military, and AMC in particular, provides a unique service of delivering combat and sustainment people and supplies to austere airfields and / or combat zones. However, the process could be more efficient.

This research addressed relaxing cargo restrictions for B-747 and C-17 aircraft in order to make the military global supply chain more efficient, effective, and save lives. Under the current pallet height restrictions, C-17 aircraft appear to be utilized and optimized very well.

Cost estimates were intentionally not included in this project. Leaders and managers too often try to claim potential cost savings as actual cost savings before changes are implemented and / or realized. This research project attempted to identify inefficiencies in the air cargo processing system and provide recommendations to improve processing and decrease overall transit time to the end user. Chapter IV showed the potential savings in terms of decreased pallets, missions, and processing time with increased pallet cargo heights. In order to achieve or exceed the results in Chapter IV, B-747 and C-17 aircraft must be utilized to their designed potential. Additionally, all parties along the supply chain from the individuals building pallets at DLA Susquehanna, individuals building and checking pallets at CONUS / enroute military aerial

ports and aircrews must be aware of the positive effects from increased pallet heights on the

military's global supply chain.

Appendix A

GATES Key

ATMS_ID	PLT_ID	PLT_DT	PLT_GROSS_WT	APC	APOE_MSN_ID	APOE_LEG_ID	MNFST_APOD	APOD_MSN_ID	APOD_LEG_ID	DEP_DT_TM	MDS	TAIL_NUM	MSN_PRIORITY	ARR_DT_TM
I1H040414345	09R3HV	22-Apr-04	3640	KWI	GMGJ2226S112	300	KEZ	GMGJ2226S112	9999	21-Apr-04	C130H	60413	1	21-Apr-04
AU1040500211	0R95DR	25-Jun-04	6300	OR9	ABW02640A174	500	DOV	ABW02640A174	9999	24-Jun-04	C005B	60016	1	25-Jun-04
AU1040601108	0R96VY	15-Sep-04	1110	WRI	6JH543W11176	100	SUU	6PH543W11177	150	24-Jun-04	KC010A	70120	1	24-Jun-04

APOE_APC	POD_AP	APOE_ICAO	APOD_ICAO	DIM	PLT_APOE	PLT_APOD	PLT_VOL	PLT_HT	PLT_NET_WT	PLT_PCS_QY	LTMT_CN	PLT_TY_CD	PAL_CNFG_CD	EVQ_PAL_PS
KWI	KEZ	OKBK	OKAS	Z	SDA	FRU	754	90	3340	3	FB5804	L	PC	10
OR9	DOV	ORBD	KDOV	A	OR9	DOV	300	55	6300	1	FB4497		PC	10
WRI	SUU	KWRI	KSUU	A	OR9	OKO	63	43	802	1	H91782	L	PC	10

Name	Description
ATMS_ID	Air Transportation Mission ID; Primary Mission Key (replaced with AMID)
PLT_ID	Pallet identification; First three characters equal build location, last three ID
PLT_DT	Date the pallet was built
PLT_GROSS_WT	Pallet gross weight
APC	Aerial Port Code; Location where event occurred
APOE_MSN_ID	Aerial Point of Embarkation (Departure) aircraft mission number
APOE_LEG_ID	Aerial Port of Embarkation aircraft leg ID (for internal tracking)
MNFST_APOD	Manifest Aerial Port of Debarkation
APOD_MSN_ID	Aerial Point of Debarkation (Arrival) aircraft mission number
APOD_LEG_ID	Aerial Port of Debarkation aircraft leg ID (for internal tracking)
DEP_DT_TM	Departure Date & Time
MDS	Aircraft type
TAIL_NUM	Aircraft tail number
MSN_PRIORITY	Mission priority
ARR_DT_TM	Arrival Date & Time
APOE_APC	Aerial Port of Embarkation Aerial Port Code; Aircraft departure MILAIR code
APOD_APC	Aerial Port of Debarkation Aerial Port Code; Aircraft arrival MILAIR code
APOE_ICAO	Aerial Point of Embarkation – aircraft departure ICAO
APOD_ICAO	Aerial Point of Debarkation – aircraft arrival ICAO
AIR_DIM_CD	Air Dimension Code
PLT_APOE	Pallet Aerial Point of Embarkation- Final destination for the cargo pallet
PLT_APOD	Pallet Aerial Point of Debarkation – Initial departure point for the cargo pallet
PLT_VOL	Pallet volume measured in cubic feet
PLT_HT	Pallet height measured in inches
PLT_NET_WT	Net weight of the pallet measured in pounds
PLT_PCS_QY	Pallet Pieces Quantity
PLT_ULTMT_CNSGNE	Pallet Ultimate Consignee; Customer ID number
PLT_TY_CD	Pallet Type Code; Describes how the pallet is to be built (i.e. Contour)
PAL_CNFG_CD	Pallet Configuration Code; Describes whether a pallet can exceed 72" in any dimension
EVQ_PAL_PS	Equivalent Pallet Positions; Divide by 10 for aircraft pallet positions used

Pallet Volumes

L (in)	W (in)	H (in)	Vol (ft^3)	L (in)	W (in)	H (in)	Vol (ft^3)	L (in)	W (in)	H (in)	Vol (ft^3)
88	108	1	5.5	88	108	41	225.5	88	108	81	445.5
88	108	2	11	88	108	42	231	88	108	82	451
88	108	3	16.5	88	108	43	236.5	88	108	83	456.5
88	108	4	22	88	108	44	242	88	108	84	462
88	108	5	27.5	88	108	45	247.5	88	108	85	467.5
88	108	6	33	88	108	46	253	88	108	86	473
88	108	7	38.5	88	108	47	258.5	88	108	87	478.5
88	108	8	44	88	108	48	264	88	108	88	484
88	108	9	49.5	88	108	49	269.5	88	108	89	489.5
88	108	10	55	88	108	50	275	88	108	90	495
88	108	11	60.5	88	108	51	280.5	88	108	91	500.5
88	108	12	66	88	108	52	286	88	108	92	506
88	108	13	71.5	88	108	53	291.5	88	108	93	511.5
88	108	14	77	88	108	54	297	88	108	94	517
88	108	15	82.5	88	108	55	302.5	88	108	95	522.5
88	108	16	88	88	108	56	308	88	108	96	528
88	108	17	93.5	88	108	57	313.5	88	108	97	533.5
88	108	18	99	88	108	58	319	88	108	98	539
88	108	19	104.5	88	108	59	324.5	88	108	99	544.5
88	108	20	110	88	108	60	330	88	108	100	550
88	108	21	115.5	88	108	61	335.5	88	108	101	555.5
88	108	22	121	88	108	62	341	88	108	102	561
88	108	23	126.5	88	108	63	346.5	88	108	103	566.5
88	108	24	132	88	108	64	352	88	108	104	572
88	108	25	137.5	88	108	65	357.5	88	108	105	577.5
88	108	26	143	88	108	66	363	88	108	106	583
88	108	27	148.5	88	108	67	368.5	88	108	107	588.5
88	108	28	154	88	108	68	374	88	108	108	594
88	108	29	159.5	88	108	69	379.5	88	108	109	599.5
88	108	30	165	88	108	70	385	88	108	110	605
88	108	31	170.5	88	108	71	390.5	88	108	111	610.5
88	108	32	176	88	108	72	396	88	108	112	616
88	108	33	181.5	88	108	73	401.5	88	108	113	621.5
88	108	34	187	88	108	74	407	88	108	114	627
88	108	35	192.5	88	108	75	412.5	88	108	115	632.5
88	108	36	198	88	108	76	418	88	108	116	638
88	108	37	203.5	88	108	77	423.5	88	108	117	643.5
88	108	38	209	88	108	78	429	88	108	118	649
88	108	39	214.5	88	108	79	434.5				
88	108	40	220	88	108	80	440				

APC-ICAO-Airfield Key

APC*	ICAO	Airfield
3OR	ORAA	Al Asad AB, Iraq
ADA	LTAG	Incirlik AB, Turkey
AZ1	OAZI	Bastion Airfield, Afghanistan
BSR	ORMM	Basrah Intl, Iraq
IUD	OTBH	Al Udeid AB, Qatar
KBL	OAKB	Kabul Intl, Afghanistan
KDH	OAKN	Kandahar, Afghanistan
KEZ	OKAS	Ali Al Salem AB, Kuwait
KIK	ORKK	Kirkuk AB, Iraq
KWI	OKBK	Kuwait Intl, Kuwait
O2R	ORSH	Al Sahra, Iraq
O6R	ORQW	Qayyaarah West, Iraq
O8R	ORTF	Tall AFAR, Iraq
OA1	OAIX	Bagram AB, Afghanistan
OA4	OASL	Salernio, Afghanistan
OR5	ORAT	Al Taqaddum AB, Iraq
OR7	ORUB	Ubaydah Bin Al Jarrah, Iraq
OR9	ORBD	Balad AB, Iraq
OSM	ORBM	Mosul, Iraq
RMS	ETAR	Ramstein AB, Germany
SDA	ORBI	Baghdad Intl, Iraq
TA8	ORTL	Ali Base, Iraq
TE2	OATN	Tereen, Afghanistan

* - Code identifying pallet destination

Pallet Build Key

Code*	Location
101	Defense Logistics Agency, Pennsylvania, PA
201	Red River Depot, TX
301	Tracy Depot, CA
ADA	Incirlik AB, Turkey
CHS	Charleston AFB, SC
DOV	Dover AFB, DE
HIK	Hickam AFB, HI
OR9	Balad AB, Iraq
RIV	March ARB, CA
TA8	Ali Base, Iraq
TCM	McChord AFB, WA
WRI	McGuire AFB, NJ

* - First three letters of Pallet ID indicate where a pallet was built.

Model 1- Weekly Summary - B-747 Missions (CONUS-Incirlik AB)

B747			AZ1	(Bastion Airfield, Afghanistan)						
			Original				New			
			# Msns	# Pallets	Avg Height	Avg Weight	# Msns	# Pallets	Avg Height	Avg Weight
Week										
1	1-Jan-09	7-Jan-09	0	0	0.00	0.00	0	0.00	0.00	0.00
2	8-Jan-09	14-Jan-09	0	0	0.00	0.00	0	0.00	0.00	0.00
3	15-Jan-09	21-Jan-09	0	0	0.00	0.00	0	0.00	0.00	0.00
4	22-Jan-09	28-Jan-09	0	0	0.00	0.00	0	0.00	0.00	0.00
5	29-Jan-09	4-Feb-09	1	18	38.11	3,626.67	1	7.15	85.75	8,160.00
6	5-Feb-09	11-Feb-09	2	82	83.82	6,961.83	2	71.59	95.46	7,928.75
7	12-Feb-09	18-Feb-09	3	117	85.22	6,168.81	3	103.86	95.88	6,939.91
8	19-Feb-09	25-Feb-09	1	17	42.12	4,202.65	1	7.46	89.50	8,930.63
9	26-Feb-09	4-Mar-09	0	0	0.00	0.00	0	0.00	0.00	0.00
10	5-Mar-09	11-Mar-09	0	0	0.00	0.00	0	0.00	0.00	0.00
11	12-Mar-09	18-Mar-09	0	0	0.00	0.00	0	0.00	0.00	0.00
12	19-Mar-09	25-Mar-09	1	6	55.83	2,511.67	1	3.49	83.75	3,767.50
13	26-Mar-09	1-Apr-09	1	29	53.21	3,356.90	1	16.07	90.76	5,726.47
14	2-Apr-09	8-Apr-09	1	6	57.50	2,275.00	1	3.59	86.25	3,412.50
15	9-Apr-09	15-Apr-09	1	8	59.00	2,487.50	1	4.92	94.40	3,980.00
16	16-Apr-09	22-Apr-09	1	7	44.86	2,070.00	1	3.27	78.50	3,622.50
17	23-Apr-09	29-Apr-09	1	17	64.53	2,922.35	1	11.43	91.42	4,140.00
18	30-Apr-09	6-May-09	1	13	57.85	2,841.54	1	7.83	94.00	4,617.50
19	7-May-09	13-May-09	1	38	64.82	3,108.55	1	25.66	94.73	4,543.27
20	14-May-09	20-May-09	3	111	57.87	2,652.88	2	66.92	95.88	4,395.07
21	21-May-09	27-May-09	3	106	54.92	2,658.40	2	60.64	95.43	4,619.51
22	28-May-09	3-Jun-09	1	39	61.97	3,625.38	1	25.18	92.96	5,438.08
23	4-Jun-09	10-Jun-09	1	29	61.59	2,922.41	1	18.60	94.00	4,460.53
24	11-Jun-09	17-Jun-09	2	55	56.05	3,386.55	1	32.11	93.42	5,644.24
25	18-Jun-09	24-Jun-09	2	59	60.68	4,153.05	1	37.29	94.21	6,448.16
26	25-Jun-09	1-Jul-09	1	33	67.76	4,005.76	1	23.29	93.17	5,507.92
27	2-Jul-09	8-Jul-09	2	75	57.59	3,527.13	2	44.99	95.98	5,878.56
28	9-Jul-09	15-Jul-09	2	53	56.87	3,122.92	1	31.40	94.19	5,172.34
29	16-Jul-09	22-Jul-09	4	159	49.91	3,631.42	2	82.66	95.60	6,956.57
30	23-Jul-09	29-Jul-09	3	110	53.54	3,520.95	2	61.34	94.98	6,246.84
31	30-Jul-09	5-Aug-09	3	105	54.60	3,639.62	2	59.72	95.55	6,369.33
32	6-Aug-09	12-Aug-09	3	119	47.21	3,405.04	2	58.52	95.22	6,867.80
33	13-Aug-09	19-Aug-09	4	150	55.46	3,532.83	3	86.66	95.62	6,091.09
34	20-Aug-09	26-Aug-09	4	148	52.07	3,109.70	2	80.27	95.14	5,681.91
35	27-Aug-09	2-Sep-09	2	74	58.95	3,200.74	2	45.44	94.83	5,149.02
36	3-Sep-09	9-Sep-09	4	163	58.66	2,683.90	3	99.59	95.61	4,374.75
37	10-Sep-09	16-Sep-09	7	277	50.38	3,168.19	4	145.38	95.59	6,010.89
38	17-Sep-09	23-Sep-09	3	113	51.96	3,294.56	2	61.16	94.69	6,004.60
39	24-Sep-09	30-Sep-09	3	91	59.03	4,089.95	2	55.96	95.93	6,646.16
40	1-Oct-09	7-Oct-09	2	44	58.36	3,280.68	1	26.75	95.11	5,346.30

Week			# Msns	# Pallets	Avg Height	Avg Weight	# Msns	# Pallets	Avg Height	Avg Weight
41	8-Oct-09	14-Oct-09	3	98	60.72	3,428.34	2	61.99	95.98	5,418.98
42	15-Oct-09	21-Oct-09	2	78	52.81	3,606.58	2	42.91	95.79	6,542.16
43	22-Oct-09	28-Oct-09	2	78	66.40	4,148.44	2	53.95	95.91	5,992.19
44	29-Oct-09	4-Nov-09	4	165	48.05	3,103.09	2	82.59	95.53	6,168.80
45	5-Nov-09	11-Nov-09	1	26	68.54	3,652.88	1	18.56	93.79	4,998.68
46	12-Nov-09	18-Nov-09	2	68	52.68	3,587.21	1	37.31	94.26	6,419.21
47	19-Nov-09	25-Nov-09	3	110	42.83	2,585.05	2	49.07	94.22	5,687.10
48	26-Nov-09	2-Dec-09	3	92	60.23	2,905.71	2	57.72	95.53	4,609.05
49	3-Dec-09	9-Dec-09	3	117	56.62	3,250.38	2	69.00	96.00	5,511.52
50	10-Dec-09	16-Dec-09	3	120	58.99	3,572.96	2	73.74	95.66	5,793.99
51	17-Dec-09	23-Dec-09	2	62	67.48	3,067.10	2	43.58	95.09	4,321.82
52	24-Dec-09	31-Dec-09	1	34	64.94	3,657.94	1	23.00	96.00	5,407.39
Totals:			**103**	**3519**			**75**	**2083.6**		
Mission Optimization:			27.18%							
Pallet Optimization:			40.79%							

B747		KDH	(Kandahar, Afghanistan)							
			Original				**New**			
			# Msns	# Pallets	Avg Height	Avg Weight	# Msns	# Pallets	Avg Height	Avg Weight
Week										
1	1-Jan-09	7-Jan-09	0	0	0.00	0.00	0	0.00	0.00	0.00
2	8-Jan-09	14-Jan-09	0	0	0.00	0.00	0	0.00	0.00	0.00
3	15-Jan-09	21-Jan-09	0	0	0.00	0.00	0	0.00	0.00	0.00
4	22-Jan-09	28-Jan-09	0	0	0.00	0.00	0	0.00	0.00	0.00
5	29-Jan-09	4-Feb-09	1	17	65.29	3,370.00	1	11.56	92.50	4,774.17
6	5-Feb-09	11-Feb-09	1	17	71.41	3,009.12	1	12.65	93.38	3,935.00
7	12-Feb-09	18-Feb-09	1	30	56.33	3,759.20	1	17.60	93.89	6,265.33
8	19-Feb-09	25-Feb-09	1	16	77.06	3,907.50	1	12.84	94.85	4,809.23
9	26-Feb-09	4-Mar-09	1	38	65.21	3,438.00	1	25.81	95.31	5,024.77
10	5-Mar-09	11-Mar-09	2	45	68.02	3,737.33	1	31.89	95.66	5,255.63
11	12-Mar-09	18-Mar-09	4	128	81.56	5,664.41	3	108.75	95.78	6,651.79
12	19-Mar-09	25-Mar-09	3	98	76.82	5,339.76	2	78.42	95.29	6,624.00
13	26-Mar-09	1-Apr-09	5	178	69.13	3,530.34	4	128.19	95.40	4,871.32
14	2-Apr-09	8-Apr-09	3	89	52.62	5,340.62	2	48.78	95.57	9,700.31
15	9-Apr-09	15-Apr-09	3	103	42.72	5,626.37	2	45.83	95.65	12,598.17
16	16-Apr-09	22-Apr-09	5	172	45.05	4,983.95	2	80.72	95.67	10,583.21
17	23-Apr-09	29-Apr-09	2	75	52.07	3,888.73	1	40.68	95.24	7,113.54
18	30-Apr-09	6-May-09	2	53	60.51	4,037.08	1	33.41	94.32	6,293.09
19	7-May-09	13-May-09	3	97	67.08	3,993.51	2	67.78	95.69	5,696.62
20	14-May-09	20-May-09	2	61	54.75	3,091.48	1	34.79	95.43	5,388.00
21	21-May-09	27-May-09	1	26	62.23	3,293.08	1	16.85	95.18	5,036.47
22	28-May-09	3-Jun-09	2	59	56.41	2,569.42	1	34.67	95.09	4,331.31
23	4-Jun-09	10-Jun-09	2	47	53.13	2,737.77	1	26.01	92.48	4,765.74
24	11-Jun-09	17-Jun-09	1	42	67.90	3,794.76	1	29.71	95.07	5,312.67
25	18-Jun-09	24-Jun-09	2	49	63.67	3,127.86	1	32.50	94.55	4,644.39
26	25-Jun-09	1-Jul-09	1	35	58.00	3,579.40	1	21.15	92.27	5,694.50
27	2-Jul-09	8-Jul-09	3	115	52.54	2,811.77	2	62.94	95.90	5,132.59
28	9-Jul-09	15-Jul-09	3	92	55.37	3,307.42	2	53.06	94.33	5,634.87
29	16-Jul-09	22-Jul-09	3	98	49.33	3,313.36	2	50.35	94.78	6,366.84
30	23-Jul-09	29-Jul-09	3	90	59.92	3,325.56	2	56.18	94.61	5,250.88

Week	Start	End	# Msns	# Pallets	Avg Height	Avg Weight	# Msns	# Pallets	Avg Height	Avg Weight
31	30-Jul-09	5-Aug-09	3	90	62.79	3,802.72	2	58.86	95.78	5,800.76
32	6-Aug-09	12-Aug-09	4	133	56.35	3,144.47	2	78.06	94.86	5,293.86
33	13-Aug-09	19-Aug-09	3	113	52.40	2,927.04	2	61.68	95.50	5,334.76
34	20-Aug-09	26-Aug-09	3	97	57.81	4,116.24	2	58.42	95.05	6,767.37
35	27-Aug-09	2-Sep-09	4	127	66.02	4,610.74	3	87.33	95.27	6,654.14
36	3-Sep-09	9-Sep-09	2	83	62.41	3,206.87	2	53.96	95.93	4,929.07
37	10-Sep-09	16-Sep-09	3	87	58.57	3,587.18	2	53.08	94.37	5,779.35
38	17-Sep-09	23-Sep-09	4	128	59.91	4,355.35	2	79.88	95.85	6,968.56
39	24-Sep-09	30-Sep-09	4	157	57.10	3,819.76	3	93.38	95.36	6,379.82
40	1-Oct-09	7-Oct-09	3	122	53.84	3,910.99	2	68.43	95.20	6,915.09
41	8-Oct-09	14-Oct-09	4	133	66.30	3,950.00	3	91.85	95.85	5,710.33
42	15-Oct-09	21-Oct-09	3	116	66.44	3,995.28	2	80.28	95.15	5,721.64
43	22-Oct-09	28-Oct-09	2	73	71.05	4,329.79	2	54.03	94.31	5,746.82
44	29-Oct-09	4-Nov-09	4	148	64.98	4,090.43	3	100.18	95.22	5,993.89
45	5-Nov-09	11-Nov-09	2	55	51.82	3,940.82	1	29.69	95.00	7,224.83
46	12-Nov-09	18-Nov-09	3	107	67.30	3,642.60	2	75.01	94.75	5,128.39
47	19-Nov-09	25-Nov-09	4	133	63.96	4,123.12	3	88.61	95.58	6,161.52
48	26-Nov-09	2-Dec-09	2	79	66.33	4,399.63	2	54.58	95.27	6,319.47
49	3-Dec-09	9-Dec-09	3	112	64.84	3,948.04	2	75.65	95.55	5,818.16
50	10-Dec-09	16-Dec-09	4	127	65.17	4,010.59	3	86.22	95.14	5,854.54
51	17-Dec-09	23-Dec-09	3	88	61.95	3,584.77	2	56.79	95.65	5,534.39
52	24-Dec-09	31-Dec-09	4	133	77.35	4,515.77	3	107.16	95.25	5,561.08
	Totals:		**131**	**4311**			**90**	**2756.24**		

Mission Optimization: 31.30%

Pallet Optimization: 36.06%

B747			**OA1**	**(Bagram AB, Afghanistan)**						
				Original				**New**		
			#	#	Avg	Avg	#	#	Avg	Avg
Week			Msns	Pallets	Height	Weight	Msns	Pallets	Height	Weight
1	1-Jan-09	7-Jan-09	0	0	0.00	0.00	0	0.00	0.00	0.00
2	8-Jan-09	14-Jan-09	0	0	0.00	0.00	0	0.00	0.00	0.00
3	15-Jan-09	21-Jan-09	0	0	0.00	0.00	0	0.00	0.00	0.00
4	22-Jan-09	28-Jan-09	0	0	0.00	0.00	0	0.00	0.00	0.00
5	29-Jan-09	4-Feb-09	0	0	0.00	0.00	0	0.00	0.00	0.00
6	5-Feb-09	11-Feb-09	0	0	0.00	0.00	0	0.00	0.00	0.00
7	12-Feb-09	18-Feb-09	0	0	0.00	0.00	0	0.00	0.00	0.00
8	19-Feb-09	25-Feb-09	0	0	0.00	0.00	0	0.00	0.00	0.00
9	26-Feb-09	4-Mar-09	0	0	0.00	0.00	0	0.00	0.00	0.00
10	5-Mar-09	11-Mar-09	0	0	0.00	0.00	0	0.00	0.00	0.00
11	12-Mar-09	18-Mar-09	0	0	0.00	0.00	0	0.00	0.00	0.00
12	19-Mar-09	25-Mar-09	0	0	0.00	0.00	0	0.00	0.00	0.00
13	26-Mar-09	1-Apr-09	0	0	0.00	0.00	0	0.00	0.00	0.00
14	2-Apr-09	8-Apr-09	0	0	0.00	0.00	0	0.00	0.00	0.00
15	9-Apr-09	15-Apr-09	0	0	0.00	0.00	0	0.00	0.00	0.00
16	16-Apr-09	22-Apr-09	0	0	0.00	0.00	0	0.00	0.00	0.00
17	23-Apr-09	29-Apr-09	0	0	0.00	0.00	0	0.00	0.00	0.00
18	30-Apr-09	6-May-09	0	0	0.00	0.00	0	0.00	0.00	0.00
19	7-May-09	13-May-09	0	0	0.00	0.00	0	0.00	0.00	0.00
20	14-May-09	20-May-09	0	0	0.00	0.00	0	0.00	0.00	0.00

Week			# Msns	# Pallets	Avg Height	Avg Weight	# Msns	# Pallets	Avg Height	Avg Weight
21	21-May-09	27-May-09	0	0	0.00	0.00	0	0.00	0.00	0.00
22	28-May-09	3-Jun-09	0	0	0.00	0.00	0	0.00	0.00	0.00
23	4-Jun-09	10-Jun-09	0	0	0.00	0.00	0	0.00	0.00	0.00
24	11-Jun-09	17-Jun-09	0	0	0.00	0.00	0	0.00	0.00	0.00
25	18-Jun-09	24-Jun-09	0	0	0.00	0.00	0	0.00	0.00	0.00
26	25-Jun-09	1-Jul-09	0	0	0.00	0.00	0	0.00	0.00	0.00
27	2-Jul-09	8-Jul-09	0	0	0.00	0.00	0	0.00	0.00	0.00
28	9-Jul-09	15-Jul-09	0	0	0.00	0.00	0	0.00	0.00	0.00
29	16-Jul-09	22-Jul-09	0	0	0.00	0.00	0	0.00	0.00	0.00
30	23-Jul-09	29-Jul-09	0	0	0.00	0.00	0	0.00	0.00	0.00
31	30-Jul-09	5-Aug-09	0	0	0.00	0.00	0	0.00	0.00	0.00
32	6-Aug-09	12-Aug-09	0	0	0.00	0.00	0	0.00	0.00	0.00
33	13-Aug-09	19-Aug-09	0	0	0.00	0.00	0	0.00	0.00	0.00
34	20-Aug-09	26-Aug-09	0	0	0.00	0.00	0	0.00	0.00	0.00
35	27-Aug-09	2-Sep-09	0	0	0.00	0.00	0	0.00	0.00	0.00
36	3-Sep-09	9-Sep-09	0	0	0.00	0.00	0	0.00	0.00	0.00
37	10-Sep-09	16-Sep-09	0	0	0.00	0.00	0	0.00	0.00	0.00
38	17-Sep-09	23-Sep-09	0	0	0.00	0.00	0	0.00	0.00	0.00
39	24-Sep-09	30-Sep-09	0	0	0.00	0.00	0	0.00	0.00	0.00
40	1-Oct-09	7-Oct-09	0	0	0.00	0.00	0	0.00	0.00	0.00
41	8-Oct-09	14-Oct-09	0	0	0.00	0.00	0	0.00	0.00	0.00
42	15-Oct-09	21-Oct-09	0	0	0.00	0.00	0	0.00	0.00	0.00
43	22-Oct-09	28-Oct-09	0	0	0.00	0.00	0	0.00	0.00	0.00
44	29-Oct-09	4-Nov-09	0	0	0.00	0.00	0	0.00	0.00	0.00
45	5-Nov-09	11-Nov-09	0	0	0.00	0.00	0	0.00	0.00	0.00
46	12-Nov-09	18-Nov-09	0	0	0.00	0.00	0	0.00	0.00	0.00
47	19-Nov-09	25-Nov-09	0	0	0.00	0.00	0	0.00	0.00	0.00
48	26-Nov-09	2-Dec-09	0	0	0.00	0.00	0	0.00	0.00	0.00
49	3-Dec-09	9-Dec-09	0	0	0.00	0.00	0	0.00	0.00	0.00
50	10-Dec-09	16-Dec-09	0	0	0.00	0.00	0	0.00	0.00	0.00
51	17-Dec-09	23-Dec-09	1	1	84.00	2,330.00	1	0.88	84.00	2,330.00
52	24-Dec-09	31-Dec-09	0	0	0.00	0.00	0	0.00	0.00	0.00
	Totals:		**1**	**1**			**1**	**0.875**		

Mission Optimization: 0.00%

Pallet Optimization: 12.50%

	B747		OA4	(Salernio, Afghanistan)						
				Original				**New**		
			#	#	Avg	Avg	#	#	Avg	Avg
Week			Msns	Pallets	Height	Weight	Msns	Pallets	Height	Weight
1	1-Jan-09	7-Jan-09	0	0	0.00	0.00	0	0.00	0.00	0.00
2	8-Jan-09	14-Jan-09	0	0	0.00	0.00	0	0.00	0.00	0.00
3	15-Jan-09	21-Jan-09	0	0	0.00	0.00	0	0.00	0.00	0.00
4	22-Jan-09	28-Jan-09	0	0	0.00	0.00	0	0.00	0.00	0.00
5	29-Jan-09	4-Feb-09	0	0	0.00	0.00	0	0.00	0.00	0.00
6	5-Feb-09	11-Feb-09	0	0	0.00	0.00	0	0.00	0.00	0.00
7	12-Feb-09	18-Feb-09	0	0	0.00	0.00	0	0.00	0.00	0.00
8	19-Feb-09	25-Feb-09	0	0	0.00	0.00	0	0.00	0.00	0.00
9	26-Feb-09	4-Mar-09	0	0	0.00	0.00	0	0.00	0.00	0.00
10	5-Mar-09	11-Mar-09	0	0	0.00	0.00	0	0.00	0.00	0.00

Week			# Msns	# Pallets	Avg Height	Avg Weight	# Msns	# Pallets	Avg Height	Avg Weight
11	12-Mar-09	18-Mar-09	1	1	52.00	3,540.00	1	0.54	52.00	3,540.00
12	19-Mar-09	25-Mar-09	0	0	0.00	0.00	0	0.00	0.00	0.00
13	26-Mar-09	1-Apr-09	0	0	0.00	0.00	0	0.00	0.00	0.00
14	2-Apr-09	8-Apr-09	0	0	0.00	0.00	0	0.00	0.00	0.00
15	9-Apr-09	15-Apr-09	0	0	0.00	0.00	0	0.00	0.00	0.00
16	16-Apr-09	22-Apr-09	0	0	0.00	0.00	0	0.00	0.00	0.00
17	23-Apr-09	29-Apr-09	0	0	0.00	0.00	0	0.00	0.00	0.00
18	30-Apr-09	6-May-09	0	0	0.00	0.00	0	0.00	0.00	0.00
19	7-May-09	13-May-09	0	0	0.00	0.00	0	0.00	0.00	0.00
20	14-May-09	20-May-09	0	0	0.00	0.00	0	0.00	0.00	0.00
21	21-May-09	27-May-09	0	0	0.00	0.00	0	0.00	0.00	0.00
22	28-May-09	3-Jun-09	0	0	0.00	0.00	0	0.00	0.00	0.00
23	4-Jun-09	10-Jun-09	0	0	0.00	0.00	0	0.00	0.00	0.00
24	11-Jun-09	17-Jun-09	0	0	0.00	0.00	0	0.00	0.00	0.00
25	18-Jun-09	24-Jun-09	0	0	0.00	0.00	0	0.00	0.00	0.00
26	25-Jun-09	1-Jul-09	0	0	0.00	0.00	0	0.00	0.00	0.00
27	2-Jul-09	8-Jul-09	0	0	0.00	0.00	0	0.00	0.00	0.00
28	9-Jul-09	15-Jul-09	0	0	0.00	0.00	0	0.00	0.00	0.00
29	16-Jul-09	22-Jul-09	0	0	0.00	0.00	0	0.00	0.00	0.00
30	23-Jul-09	29-Jul-09	0	0	0.00	0.00	0	0.00	0.00	0.00
31	30-Jul-09	5-Aug-09	0	0	0.00	0.00	0	0.00	0.00	0.00
32	6-Aug-09	12-Aug-09	0	0	0.00	0.00	0	0.00	0.00	0.00
33	13-Aug-09	19-Aug-09	0	0	0.00	0.00	0	0.00	0.00	0.00
34	20-Aug-09	26-Aug-09	0	0	0.00	0.00	0	0.00	0.00	0.00
35	27-Aug-09	2-Sep-09	0	0	0.00	0.00	0	0.00	0.00	0.00
36	3-Sep-09	9-Sep-09	0	0	0.00	0.00	0	0.00	0.00	0.00
37	10-Sep-09	16-Sep-09	0	0	0.00	0.00	0	0.00	0.00	0.00
38	17-Sep-09	23-Sep-09	0	0	0.00	0.00	0	0.00	0.00	0.00
39	24-Sep-09	30-Sep-09	0	0	0.00	0.00	0	0.00	0.00	0.00
40	1-Oct-09	7-Oct-09	0	0	0.00	0.00	0	0.00	0.00	0.00
41	8-Oct-09	14-Oct-09	0	0	0.00	0.00	0	0.00	0.00	0.00
42	15-Oct-09	21-Oct-09	0	0	0.00	0.00	0	0.00	0.00	0.00
43	22-Oct-09	28-Oct-09	0	0	0.00	0.00	0	0.00	0.00	0.00
44	29-Oct-09	4-Nov-09	0	0	0.00	0.00	0	0.00	0.00	0.00
45	5-Nov-09	11-Nov-09	0	0	0.00	0.00	0	0.00	0.00	0.00
46	12-Nov-09	18-Nov-09	0	0	0.00	0.00	0	0.00	0.00	0.00
47	19-Nov-09	25-Nov-09	0	0	0.00	0.00	0	0.00	0.00	0.00
48	26-Nov-09	2-Dec-09	0	0	0.00	0.00	0	0.00	0.00	0.00
49	3-Dec-09	9-Dec-09	1	1	29.00	2,970.00	1	0.30	29.00	2,970.00
50	10-Dec-09	16-Dec-09	0	0	0.00	0.00	0	0.00	0.00	0.00
51	17-Dec-09	23-Dec-09	0	0	0.00	0.00	0	0.00	0.00	0.00
52	24-Dec-09	31-Dec-09	0	0	0.00	0.00	0	0.00	0.00	0.00

Totals: 2 2   2 0.84375

Mission Optimization: 0.00%

Pallet Optimization: 57.81%

B747		TE2 (Tereen, Afghanistan)								
			Original				New			
Week			# Msns	# Pallets	Avg Height	Avg Weight	# Msns	# Pallets	Avg Height	Avg Weight

#	Start	End								
1	1-Jan-09	7-Jan-09	0	0	0.00	0.00	0	0.00	0.00	0.00
2	8-Jan-09	14-Jan-09	0	0	0.00	0.00	0	0.00	0.00	0.00
3	15-Jan-09	21-Jan-09	0	0	0.00	0.00	0	0.00	0.00	0.00
4	22-Jan-09	28-Jan-09	0	0	0.00	0.00	0	0.00	0.00	0.00
5	29-Jan-09	4-Feb-09	0	0	0.00	0.00	0	0.00	0.00	0.00
6	5-Feb-09	11-Feb-09	0	0	0.00	0.00	0	0.00	0.00	0.00
7	12-Feb-09	18-Feb-09	0	0	0.00	0.00	0	0.00	0.00	0.00
8	19-Feb-09	25-Feb-09	0	0	0.00	0.00	0	0.00	0.00	0.00
9	26-Feb-09	4-Mar-09	0	0	0.00	0.00	0	0.00	0.00	0.00
10	5-Mar-09	11-Mar-09	0	0	0.00	0.00	0	0.00	0.00	0.00
11	12-Mar-09	18-Mar-09	0	0	0.00	0.00	0	0.00	0.00	0.00
12	19-Mar-09	25-Mar-09	0	0	0.00	0.00	0	0.00	0.00	0.00
13	26-Mar-09	1-Apr-09	0	0	0.00	0.00	0	0.00	0.00	0.00
14	2-Apr-09	8-Apr-09	0	0	0.00	0.00	0	0.00	0.00	0.00
15	9-Apr-09	15-Apr-09	0	0	0.00	0.00	0	0.00	0.00	0.00
16	16-Apr-09	22-Apr-09	0	0	0.00	0.00	0	0.00	0.00	0.00
17	23-Apr-09	29-Apr-09	0	0	0.00	0.00	0	0.00	0.00	0.00
18	30-Apr-09	6-May-09	0	0	0.00	0.00	0	0.00	0.00	0.00
19	7-May-09	13-May-09	0	0	0.00	0.00	0	0.00	0.00	0.00
20	14-May-09	20-May-09	0	0	0.00	0.00	0	0.00	0.00	0.00
21	21-May-09	27-May-09	0	0	0.00	0.00	0	0.00	0.00	0.00
22	28-May-09	3-Jun-09	0	0	0.00	0.00	0	0.00	0.00	0.00
23	4-Jun-09	10-Jun-09	0	0	0.00	0.00	0	0.00	0.00	0.00
24	11-Jun-09	17-Jun-09	1	3	71.33	2,276.67	1	2.23	71.33	2,276.67
25	18-Jun-09	24-Jun-09	1	4	61.00	2,095.00	1	2.54	81.33	2,793.33
26	25-Jun-09	1-Jul-09	1	2	45.50	1,080.00	1	0.95	91.00	2,160.00
27	2-Jul-09	8-Jul-09	1	2	41.00	1,485.00	1	0.85	82.00	2,970.00
28	9-Jul-09	15-Jul-09	1	1	32.00	1,140.00	1	0.33	32.00	1,140.00
29	16-Jul-09	22-Jul-09	1	2	42.00	1,205.00	1	0.88	84.00	2,410.00
30	23-Jul-09	29-Jul-09	0	0	0.00	0.00	0	0.00	0.00	0.00
31	30-Jul-09	5-Aug-09	1	1	35.00	810.00	1	0.36	35.00	810.00
32	6-Aug-09	12-Aug-09	1	3	77.33	1,220.00	1	2.42	77.33	1,220.00
33	13-Aug-09	19-Aug-09	1	1	35.00	1,400.00	1	0.36	35.00	1,400.00
34	20-Aug-09	26-Aug-09	1	1	40.00	1,370.00	1	0.42	40.00	1,370.00
35	27-Aug-09	2-Sep-09	1	1	90.00	3,790.00	1	0.94	90.00	3,790.00
36	3-Sep-09	9-Sep-09	1	2	86.50	2,875.00	1	1.80	86.50	2,875.00
37	10-Sep-09	16-Sep-09	1	1	92.00	3,140.00	1	0.96	92.00	3,140.00
38	17-Sep-09	23-Sep-09	1	3	81.00	3,196.67	1	2.53	81.00	3,196.67
39	24-Sep-09	30-Sep-09	1	2	56.00	1,985.00	1	1.17	56.00	1,985.00
40	1-Oct-09	7-Oct-09	1	5	58.60	1,338.00	1	3.05	73.25	1,672.50
41	8-Oct-09	14-Oct-09	1	2	81.50	2,375.00	1	1.70	81.50	2,375.00
42	15-Oct-09	21-Oct-09	1	4	73.00	2,855.00	1	3.04	73.00	2,855.00
43	22-Oct-09	28-Oct-09	1	4	58.25	1,792.50	1	2.43	77.67	2,390.00
44	29-Oct-09	4-Nov-09	1	10	64.20	2,293.00	1	6.69	91.71	3,275.71
45	5-Nov-09	11-Nov-09	1	3	80.33	3,105.00	1	2.51	80.33	3,105.00
46	12-Nov-09	18-Nov-09	1	1	81.00	2,430.00	1	0.84	81.00	2,430.00
47	19-Nov-09	25-Nov-09	1	2	66.00	1,855.00	1	1.38	66.00	1,855.00
48	26-Nov-09	2-Dec-09	1	6	52.67	1,783.33	1	3.29	79.00	2,675.00
49	3-Dec-09	9-Dec-09	1	4	62.25	2,332.50	1	2.59	83.00	3,110.00
50	10-Dec-09	16-Dec-09	1	3	51.67	1,453.33	1	1.61	77.50	2,180.00

51	17-Dec-09	23-Dec-09	1	3	59.00	1,980.00	1	1.84	88.50	2,970.00
52	24-Dec-09	31-Dec-09	1	4	72.00	2,155.00	1	3.00	96.00	2,873.33
	Totals:		**28**	**80**			**28**	**52.7188**		
	Mission Optimization:					**0.00%**				
	Pallet Optimization:					**34.10%**				

B-747 Model Corrections:

			KDH	(Kandahar, Afghanistan)						
				Original				New		
			#	#	Avg	Avg	#	#	Avg	Avg
Week			**Msns**	**Pallets**	**Height**	**Weight**	**Msns**	**Pallets**	**Height**	**Weight**
15	4/9/09 0:00	4/15/09 23:59	3	103	42.72	5,626.37	2	45.83	95.65	12,598.17
15C*	4/9/09 0:00	4/15/09 23:59	3	103	42.72	5,626.37	2	58.67	74.58	9,822.31
16	4/16/09 0:00	4/22/09 23:59	5	172	45.05	4,983.95	2	80.72	95.67	10,583.21
16C*	4/16/09 0:00	4/22/09 23:59	5	172	45.05	4,983.95	3	86.10	89.07	9,853.33

* KDH week 15 corrected from 96" to 75" pallet height. Week 16 corrected from 96" to 90" pallet height.

Model 2 - Weekly Summary - B-747 Missions (CONUS-Incirlik AB)

			AZ1	(Bastion Airfield, Afghanistan)							Supplemental	
B747				Original				New				
			#	#	Avg	Avg	#	#	Avg	Avg	#	#
Week			**Msns**	**Pallets**	**Height**	**Weight**	**Msns**	**Pallets**	**Height**	**Weight**	**Msns**	**Pallets**
1	1-Jan-09	7-Jan-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
2	8-Jan-09	14-Jan-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
3	15-Jan-09	21-Jan-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
4	22-Jan-09	28-Jan-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
5	29-Jan-09	4-Feb-09	1	18	38.11	3,626.67	1	7.15	85.75	8,160.00	0	0
6	5-Feb-09	11-Feb-09	2	82	83.82	6,961.83	2	71.59	95.46	7,928.75	0	0
7	12-Feb-09	18-Feb-09	3	117	85.22	6,168.81	3	103.86	95.88	6,939.91	0	0
8	19-Feb-09	25-Feb-09	1	17	42.12	4,202.65	1	7.46	89.50	8,930.63	0	0
9	26-Feb-09	4-Mar-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
10	5-Mar-09	11-Mar-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
11	12-Mar-09	18-Mar-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
12	19-Mar-09	25-Mar-09	1	6	55.83	2,511.67	1	3.49	83.75	3,767.50	0	0
13	26-Mar-09	1-Apr-09	1	29	53.21	3,356.90	1	16.07	90.76	5,726.47	0	0
14	2-Apr-09	8-Apr-09	1	6	57.50	2,275.00	1	3.59	86.25	3,412.50	0	0
15	9-Apr-09	15-Apr-09	1	8	59.00	2,487.50	1	4.92	94.40	3,980.00	0	0
16	16-Apr-09	22-Apr-09	1	7	44.86	2,070.00	1	3.27	78.50	3,622.50	0	0
17	23-Apr-09	29-Apr-09	1	17	64.53	2,922.35	1	11.43	91.42	4,140.00	0	0
18	30-Apr-09	6-May-09	1	13	57.85	2,841.54	1	7.83	94.00	4,617.50	0	0
19	7-May-09	13-May-09	1	36	66.39	3,066.53	1	24.90	95.60	4,415.80	1	2
20	14-May-09	20-May-09	3	109	58.25	2,631.01	2	66.14	94.76	4,280.30	1	2
21	21-May-09	27-May-09	3	106	54.92	2,658.40	2	60.64	95.43	4,619.51	0	0
22	28-May-09	3-Jun-09	1	39	61.97	3,625.38	1	25.18	92.96	5,438.08	0	0
23	4-Jun-09	10-Jun-09	1	29	61.59	2,922.41	1	18.60	94.00	4,460.53	0	0
24	11-Jun-09	17-Jun-09	2	55	56.05	3,386.55	1	32.11	93.42	5,644.24	0	0
25	18-Jun-09	24-Jun-09	2	57	62.16	4,212.46	1	36.91	95.76	6,489.46	1	2
26	25-Jun-09	1-Jul-09	1	33	67.76	4,005.76	1	23.29	93.17	5,507.92	0	0
27	2-Jul-09	8-Jul-09	2	71	59.70	3,620.85	2	44.16	94.20	5,712.89	1	4
28	9-Jul-09	15-Jul-09	2	51	57.98	3,180.69	1	30.80	95.39	5,232.74	1	2
29	16-Jul-09	22-Jul-09	3	107	61.24	4,374.72	2	68.26	94.97	6,783.99	2	52
30	23-Jul-09	29-Jul-09	2	84	63.15	3,922.85	2	55.26	94.73	5,884.27	1	26
31	30-Jul-09	5-Aug-09	2	77	68.64	4,214.03	2	55.05	94.38	5,794.29	1	28
32	6-Aug-09	12-Aug-09	3	89	57.82	3,857.08	2	53.60	95.30	6,357.04	1	30
33	13-Aug-09	19-Aug-09	4	129	61.65	3,710.08	2	82.84	95.82	5,766.27	1	21
34	20-Aug-09	26-Aug-09	3	102	67.96	3,741.96	2	72.21	94.96	5,228.49	2	46
35	27-Aug-09	2-Sep-09	2	68	62.76	3,329.12	2	44.46	94.84	5,030.67	1	6
36	3-Sep-09	9-Sep-09	4	143	64.59	2,763.29	3	96.22	95.23	4,073.71	1	20
37	10-Sep-09	16-Sep-09	6	237	55.68	3,371.05	4	137.46	95.62	5,789.42	1	40
38	17-Sep-09	23-Sep-09	3	97	58.21	3,467.84	2	58.81	95.69	5,701.36	1	16
39	24-Sep-09	30-Sep-09	2	80	64.60	4,268.38	2	53.83	95.70	6,323.52	1	11
40	1-Oct-09	7-Oct-09	1	38	63.79	3,483.42	1	25.25	93.23	5,091.15	1	6
41	8-Oct-09	14-Oct-09	3	90	63.93	3,541.02	2	59.94	95.90	5,311.53	1	8
42	15-Oct-09	21-Oct-09	2	59	64.58	4,187.20	1	39.69	95.25	6,176.13	1	19

Week			# Msns	# Pallets	Avg Height	Avg Weight	# Msns	# Pallets	Avg Height	Avg Weight	# Msns	# Pallets
43	22-Oct-09	28-Oct-09	2	74	68.58	4,341.80	2	52.86	95.75	6,062.13	1	4
44	29-Oct-09	4-Nov-09	3	111	55.95	3,580.72	2	64.70	95.55	6,114.77	2	54
45	5-Nov-09	11-Nov-09	1	26	68.54	3,652.88	1	18.56	93.79	4,998.68	0	0
46	12-Nov-09	18-Nov-09	2	58	58.41	3,869.83	1	35.29	94.11	6,234.72	1	10
47	19-Nov-09	25-Nov-09	2	64	59.95	3,191.02	1	39.97	95.93	5,105.63	2	46
48	26-Nov-09	2-Dec-09	2	78	64.92	3,176.35	2	52.75	95.55	4,674.62	1	14
49	3-Dec-09	9-Dec-09	3	98	63.46	3,444.08	2	64.78	95.68	5,192.62	1	19
50	10-Dec-09	16-Dec-09	3	120	58.99	3,572.96	2	73.74	95.66	5,793.99	0	0
51	17-Dec-09	23-Dec-09	2	62	67.48	3,067.10	2	43.58	95.09	4,321.82	0	0
52	24-Dec-09	31-Dec-09	1	34	64.94	3,657.94	1	23.00	96.00	5,407.39	0	0
Totals:			93	3031			72	1975.51			29	488
Mission Optimization:						22.58%						
Pallet Optimization:						34.82%						

B747			KDH	(Kandahar, Afghanistan)								
			Original				**New**				**Supplemental**	
			#	#	Avg	Avg	#	#	Avg	Avg	#	#
Week			**Msns**	**Pallets**	**Height**	**Weight**	**Msns**	**Pallets**	**Height**	**Weight**	**Msns**	**Pallets**
1	1-Jan-09	7-Jan-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
2	8-Jan-09	14-Jan-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
3	15-Jan-09	21-Jan-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
4	22-Jan-09	28-Jan-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
5	29-Jan-09	4-Feb-09	1	17	65.29	3,370.00	1	11.56	92.50	4,774.17	0	0
6	5-Feb-09	11-Feb-09	1	17	71.41	3,009.12	1	12.65	93.38	3,935.00	0	0
7	12-Feb-09	18-Feb-09	1	30	56.33	3,759.20	1	17.60	93.89	6,265.33	0	0
8	19-Feb-09	25-Feb-09	1	16	77.06	3,907.50	1	12.84	94.85	4,809.23	0	0
9	26-Feb-09	4-Mar-09	1	38	65.21	3,438.00	1	25.81	95.31	5,024.77	0	0
10	5-Mar-09	11-Mar-09	2	45	68.02	3,737.33	1	31.89	95.66	5,255.63	0	0
11	12-Mar-09	18-Mar-09	4	128	81.56	5,664.41	3	108.75	95.78	6,651.79	0	0
12	19-Mar-09	25-Mar-09	3	89	80.79	5,614.67	2	74.90	95.87	6,662.75	1	9
13	26-Mar-09	1-Apr-09	5	178	69.13	3,530.34	4	128.19	95.40	4,871.32	0	0
14	2-Apr-09	8-Apr-09	2	56	66.70	5,186.61	1	38.91	95.77	7,447.44	1	33
15	9-Apr-09	15-Apr-09	2	48	58.06	4,987.10	1	29.03	92.90	7,979.37	2	55
16	16-Apr-09	22-Apr-09	2	68	67.47	3,079.12	2	47.79	95.58	4,362.08	3	104
17	23-Apr-09	29-Apr-09	2	43	70.70	2,680.12	1	31.67	95.00	3,601.41	1	32
18	30-Apr-09	6-May-09	2	48	64.79	4,315.42	1	32.40	94.24	6,276.97	1	5
19	7-May-09	13-May-09	3	90	70.34	4,090.00	2	65.95	95.92	5,577.27	1	7
20	14-May-09	20-May-09	2	55	59.18	3,299.82	1	33.91	95.74	5,337.94	1	6
21	21-May-09	27-May-09	1	26	62.23	3,293.08	1	16.85	95.18	5,036.47	0	0
22	28-May-09	3-Jun-09	2	50	61.26	2,740.52	1	31.91	95.72	4,282.06	1	9
23	4-Jun-09	10-Jun-09	1	36	63.56	3,018.89	1	23.83	95.33	4,528.33	1	11
24	11-Jun-09	17-Jun-09	1	42	67.90	3,794.76	1	29.71	95.07	5,312.67	0	0
25	18-Jun-09	24-Jun-09	2	46	67.15	3,199.35	1	32.18	93.61	4,459.70	1	3
26	25-Jun-09	1-Jul-09	1	24	73.21	4,713.50	1	18.30	92.47	5,953.89	1	11
27	2-Jul-09	8-Jul-09	3	89	60.53	3,390.56	2	56.11	94.51	5,294.04	1	26
28	9-Jul-09	15-Jul-09	2	72	65.82	3,726.67	2	49.36	94.78	5,366.40	1	20
29	16-Jul-09	22-Jul-09	2	68	63.54	3,679.32	2	45.01	93.93	5,439.00	1	30
30	23-Jul-09	29-Jul-09	2	69	70.42	3,922.68	2	50.61	95.27	5,307.16	1	21
31	30-Jul-09	5-Aug-09	2	82	67.35	4,012.80	2	57.53	95.22	5,673.28	1	8

Week			# Msns	# Pallets	Avg Height	Avg Weight	# Msns	# Pallets	Avg Height	Avg Weight	# Msns	# Pallets
32	6-Aug-09	12-Aug-09	3	97	67.60	3,536.65	2	68.30	95.03	4,971.81	1	36
33	13-Aug-09	19-Aug-09	3	91	60.43	3,349.56	2	57.28	94.81	5,255.34	1	22
34	20-Aug-09	26-Aug-09	3	94	59.22	4,171.60	2	57.99	95.98	6,760.86	1	3
35	27-Aug-09	2-Sep-09	3	121	68.32	4,761.52	3	86.11	95.02	6,622.34	1	6
36	3-Sep-09	9-Sep-09	2	78	65.23	3,306.86	2	53.00	96.00	4,866.70	1	5
37	10-Sep-09	16-Sep-09	2	79	63.49	3,648.67	2	52.25	94.64	5,438.58	1	8
38	17-Sep-09	23-Sep-09	3	123	61.65	4,396.75	2	78.99	95.99	6,845.57	1	5
39	24-Sep-09	30-Sep-09	4	140	60.93	3,950.95	3	88.85	95.84	6,214.98	1	17
40	1-Oct-09	7-Oct-09	3	98	63.90	4,062.66	2	65.23	94.88	6,032.44	1	24
41	8-Oct-09	14-Oct-09	3	121	71.85	3,994.05	3	90.56	95.54	5,310.77	1	12
42	15-Oct-09	21-Oct-09	3	111	69.01	4,082.37	2	79.79	95.75	5,664.29	1	5
43	22-Oct-09	28-Oct-09	2	70	73.51	4,406.36	2	53.60	95.30	5,711.94	1	3
44	29-Oct-09	4-Nov-09	4	132	63.52	4,284.64	3	87.34	95.28	6,426.97	1	16
45	5-Nov-09	11-Nov-09	1	39	67.46	4,067.31	1	27.41	93.96	5,665.18	1	16
46	12-Nov-09	18-Nov-09	3	105	68.37	3,670.55	2	74.78	95.72	5,138.77	1	2
47	19-Nov-09	25-Nov-09	4	131	64.41	4,132.79	3	87.90	95.89	6,152.22	1	2
48	26-Nov-09	2-Dec-09	2	79	66.33	4,399.63	2	54.58	95.27	6,319.47	0	0
49	3-Dec-09	9-Dec-09	3	100	70.32	4,191.00	2	73.25	95.03	5,663.51	1	12
50	10-Dec-09	16-Dec-09	3	108	72.95	4,438.56	2	82.07	94.93	5,775.48	1	19
51	17-Dec-09	23-Dec-09	2	73	68.55	3,975.21	2	52.13	94.42	5,475.28	1	15
52	24-Dec-09	31-Dec-09	4	128	79.44	4,587.91	3	105.92	95.92	5,540.11	1	5
Totals:			**113**	**3688**			**87**	**2592.59**			**40**	**623**
Mission Optimization:							**23.01%**					
Pallet Optimization:							**29.70%**					

B747			OA1	(Bagram AB, Afghanistan)								
			Original				**New**				**Supplemental**	
			#	#	Avg	Avg	#	#	Avg	Avg	#	#
Week			Msns	Pallets	Height	Weight	Msns	Pallets	Height	Weight	Msns	Pallets
1	1-Jan-09	7-Jan-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
2	8-Jan-09	14-Jan-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
3	15-Jan-09	21-Jan-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
4	22-Jan-09	28-Jan-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
5	29-Jan-09	4-Feb-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
6	5-Feb-09	11-Feb-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
7	12-Feb-09	18-Feb-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
8	19-Feb-09	25-Feb-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
9	26-Feb-09	4-Mar-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
10	5-Mar-09	11-Mar-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
11	12-Mar-09	18-Mar-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
12	19-Mar-09	25-Mar-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
13	26-Mar-09	1-Apr-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
14	2-Apr-09	8-Apr-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
15	9-Apr-09	15-Apr-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
16	16-Apr-09	22-Apr-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
17	23-Apr-09	29-Apr-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
18	30-Apr-09	6-May-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
19	7-May-09	13-May-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
20	14-May-09	20-May-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0

Week			# Msns	# Pallets	Avg Height	Avg Weight	# Msns	# Pallets	Avg Height	Avg Weight	# Msns	# Pallets
21	21-May-09	27-May-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
22	28-May-09	3-Jun-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
23	4-Jun-09	10-Jun-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
24	11-Jun-09	17-Jun-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
25	18-Jun-09	24-Jun-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
26	25-Jun-09	1-Jul-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
27	2-Jul-09	8-Jul-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
28	9-Jul-09	15-Jul-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
29	16-Jul-09	22-Jul-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
30	23-Jul-09	29-Jul-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
31	30-Jul-09	5-Aug-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
32	6-Aug-09	12-Aug-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
33	13-Aug-09	19-Aug-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
34	20-Aug-09	26-Aug-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
35	27-Aug-09	2-Sep-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
36	3-Sep-09	9-Sep-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
37	10-Sep-09	16-Sep-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
38	17-Sep-09	23-Sep-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
39	24-Sep-09	30-Sep-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
40	1-Oct-09	7-Oct-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
41	8-Oct-09	14-Oct-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
42	15-Oct-09	21-Oct-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
43	22-Oct-09	28-Oct-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
44	29-Oct-09	4-Nov-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
45	5-Nov-09	11-Nov-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
46	12-Nov-09	18-Nov-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
47	19-Nov-09	25-Nov-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
48	26-Nov-09	2-Dec-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
49	3-Dec-09	9-Dec-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
50	10-Dec-09	16-Dec-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
51	17-Dec-09	23-Dec-09	1	1	84.00	2,330.00	1	0.88	84.00	2,330.00	0	0
52	24-Dec-09	31-Dec-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
Totals:			**1**	**1**			**1**	**0.875**			**0**	**0**

Mission Optimization: 0.00%

Pallet Optimization: 12.50%

B747			**OA4**	**(Salernio, Afghanistan)**								
			Original				New				Supplemental	
			#	#	Avg	Avg	#	#	Avg	Avg	#	#
Week			Msns	Pallets	Height	Weight	Msns	Pallets	Height	Weight	Msns	Pallets
1	1-Jan-09	7-Jan-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
2	8-Jan-09	14-Jan-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
3	15-Jan-09	21-Jan-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
4	22-Jan-09	28-Jan-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
5	29-Jan-09	4-Feb-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
6	5-Feb-09	11-Feb-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
7	12-Feb-09	18-Feb-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
8	19-Feb-09	25-Feb-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
9	26-Feb-09	4-Mar-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0

#	Start	End										
10	5-Mar-09	11-Mar-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
11	12-Mar-09	18-Mar-09	1	1	52.00	3,540.00	1	0.54	52.00	3,540.00	0	0
12	19-Mar-09	25-Mar-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
13	26-Mar-09	1-Apr-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
14	2-Apr-09	8-Apr-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
15	9-Apr-09	15-Apr-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
16	16-Apr-09	22-Apr-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
17	23-Apr-09	29-Apr-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
18	30-Apr-09	6-May-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
19	7-May-09	13-May-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
20	14-May-09	20-May-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
21	21-May-09	27-May-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
22	28-May-09	3-Jun-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
23	4-Jun-09	10-Jun-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
24	11-Jun-09	17-Jun-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
25	18-Jun-09	24-Jun-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
26	25-Jun-09	1-Jul-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
27	2-Jul-09	8-Jul-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
28	9-Jul-09	15-Jul-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
29	16-Jul-09	22-Jul-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
30	23-Jul-09	29-Jul-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
31	30-Jul-09	5-Aug-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
32	6-Aug-09	12-Aug-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
33	13-Aug-09	19-Aug-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
34	20-Aug-09	26-Aug-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
35	27-Aug-09	2-Sep-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
36	3-Sep-09	9-Sep-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
37	10-Sep-09	16-Sep-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
38	17-Sep-09	23-Sep-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
39	24-Sep-09	30-Sep-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
40	1-Oct-09	7-Oct-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
41	8-Oct-09	14-Oct-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
42	15-Oct-09	21-Oct-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
43	22-Oct-09	28-Oct-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
44	29-Oct-09	4-Nov-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
45	5-Nov-09	11-Nov-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
46	12-Nov-09	18-Nov-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
47	19-Nov-09	25-Nov-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
48	26-Nov-09	2-Dec-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
49	3-Dec-09	9-Dec-09	1	1	29.00	2,970.00	1	0.30	29.00	2,970.00	0	0
50	10-Dec-09	16-Dec-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
51	17-Dec-09	23-Dec-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
52	24-Dec-09	31-Dec-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
	Totals:		**2**	**2**			**2**	**0.84375**			**0**	**0**
	Mission Optimization:						**0.00%**					
	Pallet Optimization:						**57.81%**					

B747			TE2 (Tereen, Afghanistan)									
			Original				New				Supplemental	
			# Msns	# Pallets	Avg Height	Avg Weight	# Msns	# Pallets	Avg Height	Avg Weight	# Msns	# Pallets
Week												
1	1-Jan-09	7-Jan-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
2	8-Jan-09	14-Jan-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
3	15-Jan-09	21-Jan-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
4	22-Jan-09	28-Jan-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
5	29-Jan-09	4-Feb-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
6	5-Feb-09	11-Feb-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
7	12-Feb-09	18-Feb-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
8	19-Feb-09	25-Feb-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
9	26-Feb-09	4-Mar-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
10	5-Mar-09	11-Mar-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
11	12-Mar-09	18-Mar-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
12	19-Mar-09	25-Mar-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
13	26-Mar-09	1-Apr-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
14	2-Apr-09	8-Apr-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
15	9-Apr-09	15-Apr-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
16	16-Apr-09	22-Apr-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
17	23-Apr-09	29-Apr-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
18	30-Apr-09	6-May-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
19	7-May-09	13-May-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
20	14-May-09	20-May-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
21	21-May-09	27-May-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
22	28-May-09	3-Jun-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
23	4-Jun-09	10-Jun-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
24	11-Jun-09	17-Jun-09	1	3	71.33	2,276.67	1	2.23	71.33	2,276.67	0	0
25	18-Jun-09	24-Jun-09	1	4	61.00	2,095.00	1	2.54	81.33	2,793.33	0	0
26	25-Jun-09	1-Jul-09	1	2	45.50	1,080.00	1	0.95	91.00	2,160.00	0	0
27	2-Jul-09	8-Jul-09	1	2	41.00	1,485.00	1	0.85	82.00	2,970.00	0	0
28	9-Jul-09	15-Jul-09	1	1	32.00	1,140.00	1	0.33	32.00	1,140.00	0	0
29	16-Jul-09	22-Jul-09	1	2	42.00	1,205.00	1	0.88	84.00	2,410.00	0	0
30	23-Jul-09	29-Jul-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
31	30-Jul-09	5-Aug-09	1	1	35.00	810.00	1	0.36	35.00	810.00	0	0
32	6-Aug-09	12-Aug-09	1	3	77.33	1,220.00	1	2.42	77.33	1,220.00	0	0
33	13-Aug-09	19-Aug-09	1	1	35.00	1,400.00	1	0.36	35.00	1,400.00	0	0
34	20-Aug-09	26-Aug-09	1	1	40.00	1,370.00	1	0.42	40.00	1,370.00	0	0
35	27-Aug-09	2-Sep-09	1	1	90.00	3,790.00	1	0.94	90.00	3,790.00	0	0
36	3-Sep-09	9-Sep-09	1	2	86.50	2,875.00	1	1.80	86.50	2,875.00	0	0
37	10-Sep-09	16-Sep-09	1	1	92.00	3,140.00	1	0.96	92.00	3,140.00	0	0
38	17-Sep-09	23-Sep-09	1	3	81.00	3,196.67	1	2.53	81.00	3,196.67	0	0
39	24-Sep-09	30-Sep-09	1	2	56.00	1,985.00	1	1.17	56.00	1,985.00	0	0
40	1-Oct-09	7-Oct-09	1	5	58.60	1,338.00	1	3.05	73.25	1,672.50	0	0
41	8-Oct-09	14-Oct-09	1	2	81.50	2,375.00	1	1.70	81.50	2,375.00	0	0
42	15-Oct-09	21-Oct-09	1	4	73.00	2,855.00	1	3.04	73.00	2,855.00	0	0
43	22-Oct-09	28-Oct-09	1	4	58.25	1,792.50	1	2.43	77.67	2,390.00	0	0
44	29-Oct-09	4-Nov-09	1	10	64.20	2,293.00	1	6.69	91.71	3,275.71	0	0
45	5-Nov-09	11-Nov-09	1	3	80.33	3,105.00	1	2.51	80.33	3,105.00	0	0
46	12-Nov-09	18-Nov-09	1	1	81.00	2,430.00	1	0.84	81.00	2,430.00	0	0

47	19-Nov-09	25-Nov-09	1	2	66.00	1,855.00	1	1.38	66.00	1,855.00	0	0
48	26-Nov-09	2-Dec-09	1	6	52.67	1,783.33	1	3.29	79.00	2,675.00	0	0
49	3-Dec-09	9-Dec-09	1	4	62.25	2,332.50	1	2.59	83.00	3,110.00	0	0
50	10-Dec-09	16-Dec-09	1	3	51.67	1,453.33	1	1.61	77.50	2,180.00	0	0
51	17-Dec-09	23-Dec-09	1	3	59.00	1,980.00	1	1.84	88.50	2,970.00	0	0
52	24-Dec-09	31-Dec-09	1	4	72.00	2,155.00	1	3.00	96.00	2,873.33	0	0
	Totals:		**28**	**80**			**28**	**52.7188**			**0**	**0**
	Mission Optimization:						**0.00%**					
	Pallet Optimization:						**34.10%**					

Model 3 - Weekly Summary - B-747 Missions (CONUS-Incirlik AB)

B747			AZ1 (Bastion Airfield, Afghanistan)									
			Original				New				Supplemental	
			# Msns	# Pallets	Avg Height	Avg Weight	# Msns	# Pallets	Avg Height	Avg Weight	# Msns	# Pallets
Week												
1	1-Jan-09	7-Jan-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
2	8-Jan-09	14-Jan-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
3	15-Jan-09	21-Jan-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
4	22-Jan-09	28-Jan-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
5	29-Jan-09	4-Feb-09	1	4	51.00	5,220.00	1	2.13	68.00	6,960.00	1	14
6	5-Feb-09	11-Feb-09	2	75	89.21	7,264.33	2	69.70	95.59	7,783.21	1	7
7	12-Feb-09	18-Feb-09	3	117	85.22	6,168.81	3	103.86	95.88	6,939.91	0	0
8	19-Feb-09	25-Feb-09	1	2	62.50	4,470.00	1	1.30	62.50	4,470.00	1	15
9	26-Feb-09	4-Mar-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
10	5-Mar-09	11-Mar-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
11	12-Mar-09	18-Mar-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
12	19-Mar-09	25-Mar-09	1	4	63.75	2,910.00	1	2.66	85.00	3,880.00	1	2
13	26-Mar-09	1-Apr-09	1	9	72.44	3,712.22	1	6.79	93.14	4,772.86	1	20
14	2-Apr-09	8-Apr-09	1	3	70.67	1,953.33	1	2.21	70.67	1,953.33	1	3
15	9-Apr-09	15-Apr-09	1	4	76.75	3,180.00	1	3.20	76.75	3,180.00	1	4
16	16-Apr-09	22-Apr-09	1	1	64.00	3,760.00	1	0.67	64.00	3,760.00	1	6
17	23-Apr-09	29-Apr-09	1	15	68.13	3,016.67	1	10.65	92.91	4,113.64	1	2
18	30-Apr-09	6-May-09	1	8	68.88	3,042.50	1	5.74	91.83	4,056.67	1	5
19	7-May-09	13-May-09	1	33	69.30	3,225.00	1	23.82	95.29	4,434.38	1	5
20	14-May-09	20-May-09	3	99	59.70	2,687.37	2	61.56	95.32	4,291.13	1	12
21	21-May-09	27-May-09	3	90	57.27	2,733.78	2	53.69	95.44	4,556.30	1	16
22	28-May-09	3-Jun-09	1	33	65.70	3,859.09	1	22.58	94.26	5,536.96	1	6
23	4-Jun-09	10-Jun-09	1	26	63.92	3,085.77	1	17.31	92.33	4,457.22	1	3
24	11-Jun-09	17-Jun-09	1	31	66.23	3,575.81	1	21.39	93.32	5,038.64	1	24
25	18-Jun-09	24-Jun-09	1	38	71.89	4,687.63	1	28.46	94.21	6,142.41	1	21
26	25-Jun-09	1-Jul-09	1	26	75.62	4,328.08	1	20.48	93.62	5,358.57	1	7
27	2-Jul-09	8-Jul-09	2	50	67.14	3,957.00	1	34.97	95.91	5,652.86	1	25
28	9-Jul-09	15-Jul-09	1	30	70.10	3,831.83	1	21.91	95.59	5,225.23	1	23
29	16-Jul-09	22-Jul-09	2	82	69.26	4,912.38	2	59.16	94.65	6,713.58	2	77
30	23-Jul-09	29-Jul-09	2	56	74.66	4,282.32	2	43.55	95.02	5,450.23	2	54
31	30-Jul-09	5-Aug-09	2	64	74.84	4,525.78	2	49.90	95.80	5,793.00	1	41
32	6-Aug-09	12-Aug-09	2	62	65.39	3,913.87	2	42.23	94.28	5,643.26	2	57
33	13-Aug-09	19-Aug-09	3	85	72.64	3,972.94	2	64.31	94.98	5,195.38	2	65
34	20-Aug-09	26-Aug-09	3	86	73.66	3,872.44	2	65.99	95.98	5,045.91	2	62
35	27-Aug-09	2-Sep-09	2	54	69.02	3,199.63	1	38.82	95.56	4,430.26	1	20
36	3-Sep-09	9-Sep-09	3	94	74.35	3,189.04	2	72.80	95.74	4,106.44	2	69
37	10-Sep-09	16-Sep-09	3	125	67.51	4,015.04	3	87.91	95.90	5,703.18	4	152
38	17-Sep-09	23-Sep-09	2	69	65.81	3,693.19	2	47.30	94.60	5,308.96	2	44
39	24-Sep-09	30-Sep-09	2	59	73.83	4,777.71	2	45.38	94.70	6,127.93	1	32
40	1-Oct-09	7-Oct-09	1	33	66.73	3,402.12	1	22.94	95.74	4,881.30	1	11

Week			# Msns	# Pallets	Avg Height	Avg Weight	# Msns	# Pallets	Avg Height	Avg Weight	# Msns	# Pallets
41	8-Oct-09	14-Oct-09	2	76	67.78	3,187.50	2	53.66	95.39	4,486.11	1	22
42	15-Oct-09	21-Oct-09	2	45	71.58	4,342.56	1	33.55	94.74	5,747.50	1	33
43	22-Oct-09	28-Oct-09	2	64	72.67	4,489.11	2	48.45	94.92	5,863.33	1	14
44	29-Oct-09	4-Nov-09	2	72	66.35	3,796.25	2	49.76	95.54	5,466.60	3	93
45	5-Nov-09	11-Nov-09	1	20	78.50	3,539.50	1	16.35	92.35	4,164.12	1	6
46	12-Nov-09	18-Nov-09	1	39	67.41	4,021.28	1	27.39	93.89	5,601.07	1	29
47	19-Nov-09	25-Nov-09	2	49	66.31	3,211.63	1	33.84	95.56	4,628.53	2	61
48	26-Nov-09	2-Dec-09	2	64	70.41	3,048.13	2	46.94	95.87	4,150.64	1	28
49	3-Dec-09	9-Dec-09	2	78	69.83	3,575.90	2	56.74	95.56	4,893.33	1	39
50	10-Dec-09	16-Dec-09	3	91	66.93	3,376.65	2	63.45	95.17	4,801.17	1	29
51	17-Dec-09	23-Dec-09	2	44	78.91	3,419.77	1	36.17	93.84	4,066.76	1	18
52	24-Dec-09	31-Dec-09	1	23	76.96	3,895.22	1	18.44	93.16	4,715.26	1	11
	Totals:		**78**	**2232**			**67**	**1640.07**				
	Mission Optimization:						**14.10%**				**57**	**1,287**
	Pallet Optimization:						**26.52%**					

B747   **KDH**   **(Kandahar, Afghanistan)**

			Original				New				Supplemental	
			#	#	Avg	Avg	#	#	Avg	Avg	#	#
Week			**Msns**	**Pallets**	**Height**	**Weight**	**Msns**	**Pallets**	**Height**	**Weight**	**Msns**	**Pallets**
1	1-Jan-09	7-Jan-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
2	8-Jan-09	14-Jan-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
3	15-Jan-09	21-Jan-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
4	22-Jan-09	28-Jan-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
5	29-Jan-09	4-Feb-09	1	14	71.21	3,749.29	1	10.39	90.64	4,771.82	1	3
6	5-Feb-09	11-Feb-09	1	13	80.00	3,466.15	1	10.83	94.55	4,096.36	1	4
7	12-Feb-09	18-Feb-09	1	17	68.18	4,169.18	1	12.07	89.15	5,452.00	1	13
8	19-Feb-09	25-Feb-09	1	14	82.79	4,207.50	1	12.07	89.15	4,531.15	1	2
9	26-Feb-09	4-Mar-09	1	30	71.47	3,737.30	1	22.33	93.22	4,874.74	1	8
10	5-Mar-09	11-Mar-09	1	41	71.63	3,924.63	1	30.59	94.74	5,190.65	1	4
11	12-Mar-09	18-Mar-09	3	114	86.26	5,947.24	3	102.44	95.48	6,582.38	1	14
12	19-Mar-09	25-Mar-09	2	77	86.66	5,883.45	2	69.51	95.33	6,471.80	1	21
13	26-Mar-09	1-Apr-09	4	164	71.60	3,525.55	3	122.32	95.47	4,700.73	1	14
14	2-Apr-09	8-Apr-09	2	51	69.27	5,512.75	1	36.80	95.49	7,598.65	1	38
15	9-Apr-09	15-Apr-09	1	31	71.03	5,217.45	1	22.94	95.74	7,032.22	2	72
16	16-Apr-09	22-Apr-09	2	63	69.44	3,181.43	2	45.57	95.11	4,357.17	3	109
17	23-Apr-09	29-Apr-09	1	34	78.38	2,870.00	1	27.76	95.18	3,485.00	1	41
18	30-Apr-09	6-May-09	1	32	75.53	5,313.75	1	25.18	92.96	6,540.00	1	21
19	7-May-09	13-May-09	2	71	78.00	4,394.93	2	57.69	95.48	5,380.00	1	26
20	14-May-09	20-May-09	1	38	68.34	3,856.84	1	27.05	92.75	5,234.29	1	23
21	21-May-09	27-May-09	1	19	71.58	3,397.89	1	14.17	90.67	4,304.00	1	7
22	28-May-09	3-Jun-09	1	36	69.00	3,066.00	1	25.88	95.54	4,245.23	1	23
23	4-Jun-09	10-Jun-09	1	30	67.50	3,200.33	1	21.09	92.05	4,364.09	1	17
24	11-Jun-09	17-Jun-09	1	33	75.30	4,288.48	1	25.89	95.58	5,443.08	1	9
25	18-Jun-09	24-Jun-09	1	35	74.69	3,486.29	1	27.23	93.36	4,357.86	1	14
26	25-Jun-09	1-Jul-09	1	19	81.42	5,375.74	1	16.11	91.00	6,008.18	1	16
27	2-Jul-09	8-Jul-09	2	69	66.39	3,641.30	2	47.72	95.44	5,234.38	2	46
28	9-Jul-09	15-Jul-09	2	51	76.59	4,451.76	1	40.69	95.27	5,537.56	1	41
29	16-Jul-09	22-Jul-09	2	51	70.67	3,984.39	1	37.54	94.84	5,347.47	2	47

			# Msns	# Pallets	Avg Height	Avg Weight	# Msns	# Pallets	Avg Height	Avg Weight	# Msns	# Pallets
30	23-Jul-09	29-Jul-09	2	59	75.22	4,020.68	2	46.23	94.43	5,047.23	1	31
31	30-Jul-09	5-Aug-09	2	63	75.48	4,367.30	2	49.53	95.10	5,502.80	1	27
32	6-Aug-09	12-Aug-09	2	81	72.46	3,716.48	2	61.14	94.66	4,855.40	2	52
33	13-Aug-09	19-Aug-09	2	62	68.02	3,395.16	2	43.93	95.84	4,784.09	2	51
34	20-Aug-09	26-Aug-09	2	47	75.87	4,324.26	1	37.15	93.84	5,348.42	2	50
35	27-Aug-09	2-Sep-09	3	98	74.60	5,139.33	2	76.16	94.95	6,540.96	1	29
36	3-Sep-09	9-Sep-09	2	63	70.67	3,483.89	2	46.38	94.72	4,669.89	1	20
37	10-Sep-09	16-Sep-09	2	57	71.05	3,835.00	2	42.19	94.19	5,083.60	1	30
38	17-Sep-09	23-Sep-09	2	82	72.16	4,534.51	2	61.64	95.44	5,997.26	2	46
39	24-Sep-09	30-Sep-09	3	107	66.67	4,077.41	2	74.31	95.12	5,817.11	2	50
40	1-Oct-09	7-Oct-09	2	76	70.89	4,390.39	2	56.13	94.53	5,853.86	2	46
41	8-Oct-09	14-Oct-09	3	100	78.22	4,255.90	2	81.48	95.39	5,190.12	1	33
42	15-Oct-09	21-Oct-09	3	100	72.02	4,198.23	2	75.02	94.76	5,523.99	1	16
43	22-Oct-09	28-Oct-09	2	61	78.89	4,692.87	2	50.13	94.35	5,613.04	1	12
44	29-Oct-09	4-Nov-09	3	94	72.90	4,402.53	2	71.39	95.18	5,747.75	2	54
45	5-Nov-09	11-Nov-09	1	31	73.74	4,216.61	1	23.81	95.25	5,446.46	1	24
46	12-Nov-09	18-Nov-09	3	90	72.73	3,672.03	2	68.19	94.87	4,789.61	1	17
47	19-Nov-09	25-Nov-09	3	95	71.82	4,090.63	2	71.07	94.76	5,397.36	1	38
48	26-Nov-09	2-Dec-09	2	65	71.37	4,361.40	2	48.32	94.67	5,785.53	1	14
49	3-Dec-09	9-Dec-09	3	88	74.28	4,433.07	2	68.09	94.74	5,653.77	1	24
50	10-Dec-09	16-Dec-09	3	85	81.58	4,831.71	2	72.23	94.99	5,625.96	1	42
51	17-Dec-09	23-Dec-09	2	54	78.69	4,552.78	2	44.26	94.42	5,463.33	1	34
52	24-Dec-09	31-Dec-09	3	117	83.12	4,851.38	3	101.30	95.34	5,564.82	1	16
Totals:			92	2922			78	2261.92				
Mission Optimization:							15.22%				60	1,389
Pallet Optimization:							22.59%					

B747			**OA1**	**(Bagram AB, Afghanistan)**								
			Original				New				Supplemental	
Week			**# Msns**	**# Pallets**	**Avg Height**	**Avg Weight**	**# Msns**	**# Pallets**	**Avg Height**	**Avg Weight**	**# Msns**	**# Pallets**
1	1-Jan-09	7-Jan-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
2	8-Jan-09	14-Jan-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
3	15-Jan-09	21-Jan-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
4	22-Jan-09	28-Jan-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
5	29-Jan-09	4-Feb-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
6	5-Feb-09	11-Feb-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
7	12-Feb-09	18-Feb-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
8	19-Feb-09	25-Feb-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
9	26-Feb-09	4-Mar-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
10	5-Mar-09	11-Mar-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
11	12-Mar-09	18-Mar-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
12	19-Mar-09	25-Mar-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
13	26-Mar-09	1-Apr-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
14	2-Apr-09	8-Apr-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
15	9-Apr-09	15-Apr-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
16	16-Apr-09	22-Apr-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
17	23-Apr-09	29-Apr-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
18	30-Apr-09	6-May-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0

Week	Start	End	# Msns	# Pallets	Avg Height	Avg Weight	# Msns	# Pallets	Avg Height	Avg Weight	# Msns	# Pallets
19	7-May-09	13-May-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
20	14-May-09	20-May-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
21	21-May-09	27-May-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
22	28-May-09	3-Jun-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
23	4-Jun-09	10-Jun-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
24	11-Jun-09	17-Jun-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
25	18-Jun-09	24-Jun-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
26	25-Jun-09	1-Jul-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
27	2-Jul-09	8-Jul-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
28	9-Jul-09	15-Jul-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
29	16-Jul-09	22-Jul-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
30	23-Jul-09	29-Jul-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
31	30-Jul-09	5-Aug-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
32	6-Aug-09	12-Aug-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
33	13-Aug-09	19-Aug-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
34	20-Aug-09	26-Aug-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
35	27-Aug-09	2-Sep-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
36	3-Sep-09	9-Sep-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
37	10-Sep-09	16-Sep-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
38	17-Sep-09	23-Sep-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
39	24-Sep-09	30-Sep-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
40	1-Oct-09	7-Oct-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
41	8-Oct-09	14-Oct-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
42	15-Oct-09	21-Oct-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
43	22-Oct-09	28-Oct-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
44	29-Oct-09	4-Nov-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
45	5-Nov-09	11-Nov-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
46	12-Nov-09	18-Nov-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
47	19-Nov-09	25-Nov-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
48	26-Nov-09	2-Dec-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
49	3-Dec-09	9-Dec-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
50	10-Dec-09	16-Dec-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
51	17-Dec-09	23-Dec-09	1	1	84.00	2,330.00	1	0.88	84.00	2,330.00	0	0
52	24-Dec-09	31-Dec-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
Totals:			**1**	**1**			**1**	**0.875**				
Mission Optimization:						**0.00%**					**0**	**0**
Pallet Optimization:						**12.50%**						

B747			**OA4**	**(Salernio, Afghanistan)**								
			Original				New				Supplemental	
Week			# Msns	# Pallets	Avg Height	Avg Weight	# Msns	# Pallets	Avg Height	Avg Weight	# Msns	# Pallets
1	1-Jan-09	7-Jan-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
2	8-Jan-09	14-Jan-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
3	15-Jan-09	21-Jan-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
4	22-Jan-09	28-Jan-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
5	29-Jan-09	4-Feb-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
6	5-Feb-09	11-Feb-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
7	12-Feb-09	18-Feb-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0

8	19-Feb-09	25-Feb-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
9	26-Feb-09	4-Mar-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
10	5-Mar-09	11-Mar-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
11	12-Mar-09	18-Mar-09	1	1	52.00	3,540.00	1	0.54	52.00	3,540.00	0	0
12	19-Mar-09	25-Mar-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
13	26-Mar-09	1-Apr-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
14	2-Apr-09	8-Apr-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
15	9-Apr-09	15-Apr-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
16	16-Apr-09	22-Apr-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
17	23-Apr-09	29-Apr-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
18	30-Apr-09	6-May-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
19	7-May-09	13-May-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
20	14-May-09	20-May-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
21	21-May-09	27-May-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
22	28-May-09	3-Jun-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
23	4-Jun-09	10-Jun-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
24	11-Jun-09	17-Jun-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
25	18-Jun-09	24-Jun-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
26	25-Jun-09	1-Jul-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
27	2-Jul-09	8-Jul-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
28	9-Jul-09	15-Jul-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
29	16-Jul-09	22-Jul-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
30	23-Jul-09	29-Jul-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
31	30-Jul-09	5-Aug-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
32	6-Aug-09	12-Aug-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
33	13-Aug-09	19-Aug-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
34	20-Aug-09	26-Aug-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
35	27-Aug-09	2-Sep-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
36	3-Sep-09	9-Sep-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
37	10-Sep-09	16-Sep-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
38	17-Sep-09	23-Sep-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
39	24-Sep-09	30-Sep-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
40	1-Oct-09	7-Oct-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
41	8-Oct-09	14-Oct-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
42	15-Oct-09	21-Oct-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
43	22-Oct-09	28-Oct-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
44	29-Oct-09	4-Nov-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
45	5-Nov-09	11-Nov-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
46	12-Nov-09	18-Nov-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
47	19-Nov-09	25-Nov-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
48	26-Nov-09	2-Dec-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
49	3-Dec-09	9-Dec-09	0	0	0.00	0.00	0	0.00	0.00	0.00	1	1
50	10-Dec-09	16-Dec-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
51	17-Dec-09	23-Dec-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
52	24-Dec-09	31-Dec-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
	Totals:		**1**	**1**			**1**	**0.54167**				
	Mission Optimization:						**0.00%**				**1**	**1**
	Pallet Optimization:						**45.83%**					

B747			TE2	(Tereen, Afghanistan)							Supplemental	
			Original				New					
			#	#	Avg	Avg	#	#	Avg	Avg	#	#
Week			Msns	Pallets	Height	Weight	Msns	Pallets	Height	Weight	Msns	Pallets
1	1-Jan-09	7-Jan-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
2	8-Jan-09	14-Jan-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
3	15-Jan-09	21-Jan-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
4	22-Jan-09	28-Jan-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
5	29-Jan-09	4-Feb-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
6	5-Feb-09	11-Feb-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
7	12-Feb-09	18-Feb-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
8	19-Feb-09	25-Feb-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
9	26-Feb-09	4-Mar-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
10	5-Mar-09	11-Mar-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
11	12-Mar-09	18-Mar-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
12	19-Mar-09	25-Mar-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
13	26-Mar-09	1-Apr-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
14	2-Apr-09	8-Apr-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
15	9-Apr-09	15-Apr-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
16	16-Apr-09	22-Apr-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
17	23-Apr-09	29-Apr-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
18	30-Apr-09	6-May-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
19	7-May-09	13-May-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
20	14-May-09	20-May-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
21	21-May-09	27-May-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
22	28-May-09	3-Jun-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
23	4-Jun-09	10-Jun-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
24	11-Jun-09	17-Jun-09	1	3	71.33	2,276.67	1	2.23	71.33	2,276.67	0	0
25	18-Jun-09	24-Jun-09	1	3	65.33	2,210.00	1	2.04	65.33	2,210.00	1	1
26	25-Jun-09	1-Jul-09	0	0	0.00	0.00	0	0.00	0.00	0.00	1	2
27	2-Jul-09	8-Jul-09	0	0	0.00	0.00	0	0.00	0.00	0.00	1	2
28	9-Jul-09	15-Jul-09	0	0	0.00	0.00	0	0.00	0.00	0.00	1	1
29	16-Jul-09	22-Jul-09	0	0	0.00	0.00	0	0.00	0.00	0.00	1	2
30	23-Jul-09	29-Jul-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
31	30-Jul-09	5-Aug-09	0	0	0.00	0.00	0	0.00	0.00	0.00	1	1
32	6-Aug-09	12-Aug-09	1	2	100.00	1,210.00	1	2.08	66.67	806.67	1	1
33	13-Aug-09	19-Aug-09	0	0	0.00	0.00	0	0.00	0.00	0.00	1	1
34	20-Aug-09	26-Aug-09	0	0	0.00	0.00	0	0.00	0.00	0.00	1	1
35	27-Aug-09	2-Sep-09	1	1	90.00	3,790.00	1	0.94	90.00	3,790.00	0	0
36	3-Sep-09	9-Sep-09	1	2	86.50	2,875.00	1	1.80	86.50	2,875.00	0	0
37	10-Sep-09	16-Sep-09	1	1	92.00	3,140.00	1	0.96	92.00	3,140.00	0	0
38	17-Sep-09	23-Sep-09	1	3	81.00	3,196.67	1	2.53	81.00	3,196.67	0	0
39	24-Sep-09	30-Sep-09	1	1	65.00	2,260.00	1	0.68	65.00	2,260.00	1	1
40	1-Oct-09	7-Oct-09	1	3	68.00	1,680.00	1	2.13	68.00	1,680.00	1	2
41	8-Oct-09	14-Oct-09	1	2	81.50	2,375.00	1	1.70	81.50	2,375.00	0	0
42	15-Oct-09	21-Oct-09	1	4	73.00	2,855.00	1	3.04	73.00	2,855.00	0	0
43	22-Oct-09	28-Oct-09	1	3	64.00	1,956.67	1	2.00	96.00	2,935.00	1	1
44	29-Oct-09	4-Nov-09	1	7	73.29	2,721.43	1	5.34	85.50	3,175.00	1	3
45	5-Nov-09	11-Nov-09	1	3	80.33	3,105.00	1	2.51	80.33	3,105.00	0	0

46	12-Nov-09	18-Nov-09	1	1	81.00	2,430.00	1	0.84	81.00	2,430.00	0	0
47	19-Nov-09	25-Nov-09	1	2	66.00	1,855.00	1	1.38	66.00	1,855.00	0	0
48	26-Nov-09	2-Dec-09	1	2	78.50	3,050.00	1	1.64	78.50	3,050.00	1	4
49	3-Dec-09	9-Dec-09	1	2	79.50	2,820.00	1	1.66	79.50	2,820.00	1	2
50	10-Dec-09	16-Dec-09	1	1	71.00	1,960.00	1	0.74	71.00	1,960.00	1	2
51	17-Dec-09	23-Dec-09	1	2	71.00	2,455.00	1	1.48	71.00	2,455.00	1	1
52	24-Dec-09	31-Dec-09	1	3	81.00	2,533.33	1	2.53	81.00	2,533.33	1	1
	Totals:		**21**	**51**			**21**	**40.2396**				
	Mission Optimization:							**0.00%**			**18**	**29**
	Pallet Optimization:							**21.10%**				

Model 1 - Weekly Summary - C-17 Missions
(Incirlik AB -Afghanistan)

C17			AZ1	(Bastion Airfield, Afghanistan)						
			Original				New			
			#	#	Avg	Avg	#	#	Avg	Avg
Week			Msns	Pallets	Height	Weight	Msns	Pallets	Height	Weight
1	1-Jan-09	7-Jan-09	0	0	0.00	0.00	0	0.00	0.00	0.00
2	8-Jan-09	14-Jan-09	0	0	0.00	0.00	0	0.00	0.00	0.00
3	15-Jan-09	21-Jan-09	0	0	0.00	0.00	0	0.00	0.00	0.00
4	22-Jan-09	28-Jan-09	0	0	0.00	0.00	0	0.00	0.00	0.00
5	29-Jan-09	4-Feb-09	1	13	35.92	3,353.85	1	4.86	93.40	8,720.00
6	5-Feb-09	11-Feb-09	3	52	89.35	6,927.12	3	48.40	94.82	7,351.22
7	12-Feb-09	18-Feb-09	6	98	82.99	5,483.67	5	84.72	95.68	6,322.35
8	19-Feb-09	25-Feb-09	2	33	70.21	7,622.27	2	24.14	92.68	10,061.40
9	26-Feb-09	4-Mar-09	3	41	74.24	5,975.05	2	31.71	95.13	7,655.53
10	5-Mar-09	11-Mar-09	0	0	0.00	0.00	0	0.00	0.00	0.00
11	12-Mar-09	18-Mar-09	1	6	69.17	3,312.50	1	4.32	83.00	3,975.00
12	19-Mar-09	25-Mar-09	0	0	0.00	0.00	0	0.00	0.00	0.00
13	26-Mar-09	1-Apr-09	2	36	62.47	2,755.17	2	23.43	93.71	4,132.75
14	2-Apr-09	8-Apr-09	2	33	54.55	3,214.55	2	18.75	94.74	5,583.16
15	9-Apr-09	15-Apr-09	1	8	47.38	2,782.50	1	3.95	94.75	5,565.00
16	16-Apr-09	22-Apr-09	1	14	60.36	2,912.86	1	8.80	93.89	4,531.11
17	23-Apr-09	29-Apr-09	1	1	70.00	2,210.00	1	0.73	70.00	2,210.00
18	30-Apr-09	6-May-09	2	36	59.31	2,553.06	2	22.24	92.83	3,996.09
19	7-May-09	13-May-09	2	29	52.14	2,574.66	1	15.75	94.50	4,666.56
20	14-May-09	20-May-09	5	74	49.59	3,825.74	3	38.23	94.10	7,259.10
21	21-May-09	27-May-09	9	148	47.90	2,800.84	5	73.84	95.80	5,601.69
22	28-May-09	3-Jun-09	12	208	49.74	2,615.75	6	107.76	95.79	5,037.73
23	4-Jun-09	10-Jun-09	6	106	59.22	2,930.66	4	65.39	95.11	4,706.82
24	11-Jun-09	17-Jun-09	2	34	44.82	2,559.12	1	15.88	95.25	5,438.13
25	18-Jun-09	24-Jun-09	4	66	51.58	3,101.36	2	35.46	94.56	5,685.83
26	25-Jun-09	1-Jul-09	4	72	60.94	4,193.68	3	45.71	95.39	6,564.02
27	2-Jul-09	8-Jul-09	4	67	57.12	3,538.31	3	39.86	95.68	5,926.68
28	9-Jul-09	15-Jul-09	3	47	57.09	3,013.40	2	27.95	95.82	5,058.21
29	16-Jul-09	22-Jul-09	8	131	50.43	3,360.23	4	68.81	95.74	6,379.57
30	23-Jul-09	29-Jul-09	9	148	51.46	3,391.31	5	79.33	95.20	6,273.93
31	30-Jul-09	5-Aug-09	8	144	53.01	3,496.32	5	79.52	95.43	6,293.38
32	6-Aug-09	12-Aug-09	5	86	51.00	3,400.58	3	45.69	95.35	6,357.61
33	13-Aug-09	19-Aug-09	7	116	47.65	3,399.78	4	57.57	95.29	6,799.57
34	20-Aug-09	26-Aug-09	9	148	50.61	3,461.11	5	78.03	94.82	6,484.11
35	27-Aug-09	2-Sep-09	7	119	58.78	3,329.08	5	72.86	95.82	5,426.85
36	3-Sep-09	9-Sep-09	7	110	58.53	2,930.41	4	67.06	94.68	4,740.37
37	10-Sep-09	16-Sep-09	11	194	53.56	2,539.79	7	108.23	95.32	4,520.37
38	17-Sep-09	23-Sep-09	9	153	47.66	2,952.48	5	75.96	95.95	5,943.82
39	24-Sep-09	30-Sep-09	11	183	54.84	3,682.51	6	104.54	95.58	6,418.10

Week			# Msns	# Pallets	Avg Height	Avg Weight	# Msns	# Pallets	Avg Height	Avg Weight
40	1-Oct-09	7-Oct-09	5	87	53.43	4,023.39	3	48.42	94.86	7,143.57
41	8-Oct-09	14-Oct-09	7	110	59.47	3,622.38	4	68.15	94.81	5,774.81
42	15-Oct-09	21-Oct-09	4	70	51.64	3,239.90	3	37.66	95.13	5,968.24
43	22-Oct-09	28-Oct-09	8	135	62.64	3,607.10	5	88.09	95.02	5,471.45
44	29-Oct-09	4-Nov-09	7	121	56.14	3,313.18	4	70.76	95.68	5,646.41
45	5-Nov-09	11-Nov-09	10	177	58.05	3,525.83	6	107.03	95.14	5,778.44
46	12-Nov-09	18-Nov-09	4	67	50.60	3,950.75	2	35.31	94.17	7,352.78
47	19-Nov-09	25-Nov-09	7	120	47.10	3,184.75	4	58.88	95.80	6,477.46
48	26-Nov-09	2-Dec-09	8	131	47.87	2,808.85	4	65.32	95.02	5,575.15
49	3-Dec-09	9-Dec-09	8	135	59.30	3,018.41	5	83.39	95.30	4,851.01
50	10-Dec-09	16-Dec-09	7	114	58.16	3,295.88	4	69.06	94.71	5,367.57
51	17-Dec-09	23-Dec-09	4	64	58.81	3,180.94	3	39.21	94.10	5,089.50
52	24-Dec-09	31-Dec-09	5	90	61.31	3,348.56	4	57.48	95.14	5,196.03
	Totals:		**251**	**4175**			**157**	**2408.23**		
	Mission Optimization:					37.45%				
	Pallet Optimization:					42.32%				

	C17		**KDH**	**(Kandahar, Afghanistan)**						
				Original				**New**		
			# Msns	# Pallets	Avg Height	Avg Weight	# Msns	# Pallets	Avg Height	Avg Weight
Week			**Msns**	**Pallets**	**Height**	**Weight**	**Msns**	**Pallets**	**Height**	**Weight**
1	1-Jan-09	7-Jan-09	0	0	0.00	0.00	0	0.00	0.00	0.00
2	8-Jan-09	14-Jan-09	0	0	0.00	0.00	0	0.00	0.00	0.00
3	15-Jan-09	21-Jan-09	0	0	0.00	0.00	0	0.00	0.00	0.00
4	22-Jan-09	28-Jan-09	0	0	0.00	0.00	0	0.00	0.00	0.00
5	29-Jan-09	4-Feb-09	1	17	65.29	3,370.00	1	11.56	92.50	4,774.17
6	5-Feb-09	11-Feb-09	1	17	71.41	3,009.12	1	12.65	93.38	3,935.00
7	12-Feb-09	18-Feb-09	2	30	56.33	3,759.20	1	17.60	93.89	6,265.33
8	19-Feb-09	25-Feb-09	1	16	77.06	3,907.50	1	12.84	94.85	4,809.23
9	26-Feb-09	4-Mar-09	2	28	58.96	3,500.50	1	17.20	91.72	5,445.22
10	5-Mar-09	11-Mar-09	3	48	72.63	3,602.29	3	36.31	94.22	4,673.24
11	12-Mar-09	18-Mar-09	6	98	66.73	4,842.24	4	68.13	94.78	6,877.39
12	19-Mar-09	25-Mar-09	7	111	74.99	4,737.89	5	86.71	95.68	6,044.90
13	26-Mar-09	1-Apr-09	9	154	76.53	4,629.25	7	122.77	95.82	5,795.98
14	2-Apr-09	8-Apr-09	13	232	60.13	4,171.10	9	145.30	95.54	6,628.05
15	9-Apr-09	15-Apr-09	8	133	45.46	5,460.20	4	62.98	95.97	11,527.08
16	16-Apr-09	22-Apr-09	8	142	50.63	4,375.07	5	74.90	95.87	8,283.47
17	23-Apr-09	29-Apr-09	7	118	43.88	4,726.53	3	53.94	95.89	10,328.33
18	30-Apr-09	6-May-09	3	44	56.43	4,141.93	2	25.86	95.50	7,009.42
19	7-May-09	13-May-09	3	54	50.20	3,103.70	2	28.24	93.48	5,779.31
20	14-May-09	20-May-09	3	52	59.17	3,352.60	2	32.05	93.24	5,282.88
21	21-May-09	27-May-09	6	106	62.77	3,517.55	4	69.31	95.06	5,326.57
22	28-May-09	3-Jun-09	6	91	51.48	3,154.79	3	48.80	95.61	5,858.90
23	4-Jun-09	10-Jun-09	6	93	53.73	2,849.68	3	52.05	94.28	5,000.38
24	11-Jun-09	17-Jun-09	5	74	60.32	3,324.80	3	46.50	94.98	5,234.79
25	18-Jun-09	24-Jun-09	4	60	65.60	3,618.67	3	41.00	96.00	5,295.61
26	25-Jun-09	1-Jul-09	5	81	55.07	2,914.12	3	46.47	94.91	5,022.21
27	2-Jul-09	8-Jul-09	6	107	52.45	2,864.47	4	58.46	95.12	5,194.88
28	9-Jul-09	15-Jul-09	7	114	60.12	3,374.37	4	71.40	95.19	5,342.75

81

			# Msns	# Pallets	Avg Height	Avg Weight	# Msns	# Pallets	Avg Height	Avg Weight
29	16-Jul-09	22-Jul-09	7	111	45.32	3,100.49	3	52.40	94.91	6,493.47
30	23-Jul-09	29-Jul-09	7	126	53.06	3,051.79	4	69.64	95.50	5,493.21
31	30-Jul-09	5-Aug-09	5	90	63.58	3,656.06	4	59.60	95.37	5,484.08
32	6-Aug-09	12-Aug-09	4	64	50.89	3,662.34	2	33.93	95.79	6,893.82
33	13-Aug-09	19-Aug-09	8	131	57.47	2,875.42	5	78.42	95.29	4,768.10
34	20-Aug-09	26-Aug-09	7	124	54.78	3,035.24	4	70.76	95.68	5,300.99
35	27-Aug-09	2-Sep-09	7	123	63.87	4,252.74	5	81.83	95.80	6,379.11
36	3-Sep-09	9-Sep-09	8	129	63.43	4,107.22	5	85.23	95.14	6,160.84
37	10-Sep-09	16-Sep-09	5	79	59.43	3,567.03	3	48.91	95.82	5,750.92
38	17-Sep-09	23-Sep-09	5	88	61.76	3,652.83	4	56.61	95.35	5,639.46
39	24-Sep-09	30-Sep-09	8	137	58.01	4,313.21	5	82.79	95.76	7,119.40
40	1-Oct-09	7-Oct-09	7	124	42.56	3,602.00	4	54.98	95.96	8,120.87
41	8-Oct-09	14-Oct-09	13	219	58.96	3,773.50	8	134.50	95.64	6,121.45
42	15-Oct-09	21-Oct-09	7	118	67.10	3,944.77	5	82.48	95.40	5,608.23
43	22-Oct-09	28-Oct-09	7	112	60.35	3,799.64	4	70.41	95.20	5,993.80
44	29-Oct-09	4-Nov-09	3	54	60.31	3,296.39	2	33.93	95.79	5,235.44
45	5-Nov-09	11-Nov-09	11	188	57.82	4,093.51	7	113.24	95.36	6,750.70
46	12-Nov-09	18-Nov-09	13	221	63.23	3,772.10	9	145.56	95.71	5,709.82
47	19-Nov-09	25-Nov-09	9	150	62.62	3,846.85	6	97.84	95.85	5,888.04
48	26-Nov-09	2-Dec-09	10	176	65.26	4,478.76	7	119.64	95.71	6,568.84
49	3-Dec-09	9-Dec-09	7	125	62.13	3,826.56	5	80.90	95.88	5,905.19
50	10-Dec-09	16-Dec-09	9	156	57.31	3,726.67	6	93.14	95.12	6,184.68
51	17-Dec-09	23-Dec-09	8	144	59.47	3,639.48	5	89.20	95.14	5,823.17
52	24-Dec-09	31-Dec-09	7	116	71.28	4,080.10	5	86.13	95.03	5,440.14
	Totals:		**304**	**5125**			**195**	**3165.07**		
	Mission Optimization:						**35.86%**			
	Pallet Optimization:						**38.24%**			

	C17		**OA1**	**(Bagram AB, Afghanistan)**						
				Original				**New**		
			# Msns	# Pallets	Avg Height	Avg Weight	# Msns	# Pallets	Avg Height	Avg Weight
Week										
1	1-Jan-09	7-Jan-09	0	0	0.00	0.00	0	0.00	0.00	0.00
2	8-Jan-09	14-Jan-09	0	0	0.00	0.00	0	0.00	0.00	0.00
3	15-Jan-09	21-Jan-09	1	12	38.00	5,582.17	1	4.75	91.20	13,397.20
4	22-Jan-09	28-Jan-09	0	0	0.00	0.00	0	0.00	0.00	0.00
5	29-Jan-09	4-Feb-09	0	0	0.00	0.00	0	0.00	0.00	0.00
6	5-Feb-09	11-Feb-09	0	0	0.00	0.00	0	0.00	0.00	0.00
7	12-Feb-09	18-Feb-09	0	0	0.00	0.00	0	0.00	0.00	0.00
8	19-Feb-09	25-Feb-09	0	0	0.00	0.00	0	0.00	0.00	0.00
9	26-Feb-09	4-Mar-09	1	3	59.00	1,568.33	1	1.84	88.50	2,352.50
10	5-Mar-09	11-Mar-09	0	0	0.00	0.00	0	0.00	0.00	0.00
11	12-Mar-09	18-Mar-09	0	0	0.00	0.00	0	0.00	0.00	0.00
12	19-Mar-09	25-Mar-09	0	0	0.00	0.00	0	0.00	0.00	0.00
13	26-Mar-09	1-Apr-09	0	0	0.00	0.00	0	0.00	0.00	0.00
14	2-Apr-09	8-Apr-09	0	0	0.00	0.00	0	0.00	0.00	0.00
15	9-Apr-09	15-Apr-09	0	0	0.00	0.00	0	0.00	0.00	0.00
16	16-Apr-09	22-Apr-09	0	0	0.00	0.00	0	0.00	0.00	0.00
17	23-Apr-09	29-Apr-09	0	0	0.00	0.00	0	0.00	0.00	0.00

Week			# Msns	# Pallets	Avg Height	Avg Weight	# Msns	# Pallets	Avg Height	Avg Weight
18	30-Apr-09	6-May-09	0	0	0.00	0.00	0	0.00	0.00	0.00
19	7-May-09	13-May-09	0	0	0.00	0.00	0	0.00	0.00	0.00
20	14-May-09	20-May-09	0	0	0.00	0.00	0	0.00	0.00	0.00
21	21-May-09	27-May-09	0	0	0.00	0.00	0	0.00	0.00	0.00
22	28-May-09	3-Jun-09	0	0	0.00	0.00	0	0.00	0.00	0.00
23	4-Jun-09	10-Jun-09	0	0	0.00	0.00	0	0.00	0.00	0.00
24	11-Jun-09	17-Jun-09	0	0	0.00	0.00	0	0.00	0.00	0.00
25	18-Jun-09	24-Jun-09	0	0	0.00	0.00	0	0.00	0.00	0.00
26	25-Jun-09	1-Jul-09	0	0	0.00	0.00	0	0.00	0.00	0.00
27	2-Jul-09	8-Jul-09	0	0	0.00	0.00	0	0.00	0.00	0.00
28	9-Jul-09	15-Jul-09	0	0	0.00	0.00	0	0.00	0.00	0.00
29	16-Jul-09	22-Jul-09	0	0	0.00	0.00	0	0.00	0.00	0.00
30	23-Jul-09	29-Jul-09	0	0	0.00	0.00	0	0.00	0.00	0.00
31	30-Jul-09	5-Aug-09	0	0	0.00	0.00	0	0.00	0.00	0.00
32	6-Aug-09	12-Aug-09	0	0	0.00	0.00	0	0.00	0.00	0.00
33	13-Aug-09	19-Aug-09	0	0	0.00	0.00	0	0.00	0.00	0.00
34	20-Aug-09	26-Aug-09	1	5	91.80	6,842.00	1	4.78	91.80	6,842.00
35	27-Aug-09	2-Sep-09	0	0	0.00	0.00	0	0.00	0.00	0.00
36	3-Sep-09	9-Sep-09	0	0	0.00	0.00	0	0.00	0.00	0.00
37	10-Sep-09	16-Sep-09	0	0	0.00	0.00	0	0.00	0.00	0.00
38	17-Sep-09	23-Sep-09	0	0	0.00	0.00	0	0.00	0.00	0.00
39	24-Sep-09	30-Sep-09	0	0	0.00	0.00	0	0.00	0.00	0.00
40	1-Oct-09	7-Oct-09	0	0	0.00	0.00	0	0.00	0.00	0.00
41	8-Oct-09	14-Oct-09	0	0	0.00	0.00	0	0.00	0.00	0.00
42	15-Oct-09	21-Oct-09	0	0	0.00	0.00	0	0.00	0.00	0.00
43	22-Oct-09	28-Oct-09	0	0	0.00	0.00	0	0.00	0.00	0.00
44	29-Oct-09	4-Nov-09	0	0	0.00	0.00	0	0.00	0.00	0.00
45	5-Nov-09	11-Nov-09	0	0	0.00	0.00	0	0.00	0.00	0.00
46	12-Nov-09	18-Nov-09	0	0	0.00	0.00	0	0.00	0.00	0.00
47	19-Nov-09	25-Nov-09	0	0	0.00	0.00	0	0.00	0.00	0.00
48	26-Nov-09	2-Dec-09	0	0	0.00	0.00	0	0.00	0.00	0.00
49	3-Dec-09	9-Dec-09	1	1	56.00	2,390.00	1	0.58	56.00	2,390.00
50	10-Dec-09	16-Dec-09	0	0	0.00	0.00	0	0.00	0.00	0.00
51	17-Dec-09	23-Dec-09	0	0	0.00	0.00	0	0.00	0.00	0.00
52	24-Dec-09	31-Dec-09	0	0	0.00	0.00	0	0.00	0.00	0.00
	Totals:		**4**	**21**			**4**	**11.9583**		
	Mission Optimization:				**0.00%**					
	Pallet Optimization:				**43.06%**					

| **C17** | | | **OA4** | **(Salernio, Afghanistan)** | | | | | | |
| | | | | **Original** | | | | **New** | | |
Week			# Msns	# Pallets	Avg Height	Avg Weight	# Msns	# Pallets	Avg Height	Avg Weight
1	1-Jan-09	7-Jan-09	0	0	0.00	0.00	0	0.00	0.00	0.00
2	8-Jan-09	14-Jan-09	0	0	0.00	0.00	0	0.00	0.00	0.00
3	15-Jan-09	21-Jan-09	0	0	0.00	0.00	0	0.00	0.00	0.00
4	22-Jan-09	28-Jan-09	0	0	0.00	0.00	0	0.00	0.00	0.00
5	29-Jan-09	4-Feb-09	0	0	0.00	0.00	0	0.00	0.00	0.00
6	5-Feb-09	11-Feb-09	0	0	0.00	0.00	0	0.00	0.00	0.00

7	12-Feb-09	18-Feb-09	0	0	0.00	0.00	0	0.00	0.00	0.00
8	19-Feb-09	25-Feb-09	0	0	0.00	0.00	0	0.00	0.00	0.00
9	26-Feb-09	4-Mar-09	0	0	0.00	0.00	0	0.00	0.00	0.00
10	5-Mar-09	11-Mar-09	0	0	0.00	0.00	0	0.00	0.00	0.00
11	12-Mar-09	18-Mar-09	0	0	0.00	0.00	0	0.00	0.00	0.00
12	19-Mar-09	25-Mar-09	0	0	0.00	0.00	0	0.00	0.00	0.00
13	26-Mar-09	1-Apr-09	0	0	0.00	0.00	0	0.00	0.00	0.00
14	2-Apr-09	8-Apr-09	0	0	0.00	0.00	0	0.00	0.00	0.00
15	9-Apr-09	15-Apr-09	0	0	0.00	0.00	0	0.00	0.00	0.00
16	16-Apr-09	22-Apr-09	0	0	0.00	0.00	0	0.00	0.00	0.00
17	23-Apr-09	29-Apr-09	0	0	0.00	0.00	0	0.00	0.00	0.00
18	30-Apr-09	6-May-09	0	0	0.00	0.00	0	0.00	0.00	0.00
19	7-May-09	13-May-09	0	0	0.00	0.00	0	0.00	0.00	0.00
20	14-May-09	20-May-09	0	0	0.00	0.00	0	0.00	0.00	0.00
21	21-May-09	27-May-09	0	0	0.00	0.00	0	0.00	0.00	0.00
22	28-May-09	3-Jun-09	0	0	0.00	0.00	0	0.00	0.00	0.00
23	4-Jun-09	10-Jun-09	0	0	0.00	0.00	0	0.00	0.00	0.00
24	11-Jun-09	17-Jun-09	0	0	0.00	0.00	0	0.00	0.00	0.00
25	18-Jun-09	24-Jun-09	0	0	0.00	0.00	0	0.00	0.00	0.00
26	25-Jun-09	1-Jul-09	0	0	0.00	0.00	0	0.00	0.00	0.00
27	2-Jul-09	8-Jul-09	0	0	0.00	0.00	0	0.00	0.00	0.00
28	9-Jul-09	15-Jul-09	0	0	0.00	0.00	0	0.00	0.00	0.00
29	16-Jul-09	22-Jul-09	0	0	0.00	0.00	0	0.00	0.00	0.00
30	23-Jul-09	29-Jul-09	0	0	0.00	0.00	0	0.00	0.00	0.00
31	30-Jul-09	5-Aug-09	0	0	0.00	0.00	0	0.00	0.00	0.00
32	6-Aug-09	12-Aug-09	0	0	0.00	0.00	0	0.00	0.00	0.00
33	13-Aug-09	19-Aug-09	0	0	0.00	0.00	0	0.00	0.00	0.00
34	20-Aug-09	26-Aug-09	0	0	0.00	0.00	0	0.00	0.00	0.00
35	27-Aug-09	2-Sep-09	0	0	0.00	0.00	0	0.00	0.00	0.00
36	3-Sep-09	9-Sep-09	0	0	0.00	0.00	0	0.00	0.00	0.00
37	10-Sep-09	16-Sep-09	0	0	0.00	0.00	0	0.00	0.00	0.00
38	17-Sep-09	23-Sep-09	0	0	0.00	0.00	0	0.00	0.00	0.00
39	24-Sep-09	30-Sep-09	0	0	0.00	0.00	0	0.00	0.00	0.00
40	1-Oct-09	7-Oct-09	0	0	0.00	0.00	0	0.00	0.00	0.00
41	8-Oct-09	14-Oct-09	0	0	0.00	0.00	0	0.00	0.00	0.00
42	15-Oct-09	21-Oct-09	0	0	0.00	0.00	0	0.00	0.00	0.00
43	22-Oct-09	28-Oct-09	0	0	0.00	0.00	0	0.00	0.00	0.00
44	29-Oct-09	4-Nov-09	0	0	0.00	0.00	0	0.00	0.00	0.00
45	5-Nov-09	11-Nov-09	0	0	0.00	0.00	0	0.00	0.00	0.00
46	12-Nov-09	18-Nov-09	0	0	0.00	0.00	0	0.00	0.00	0.00
47	19-Nov-09	25-Nov-09	0	0	0.00	0.00	0	0.00	0.00	0.00
48	26-Nov-09	2-Dec-09	0	0	0.00	0.00	0	0.00	0.00	0.00
49	3-Dec-09	9-Dec-09	0	0	0.00	0.00	0	0.00	0.00	0.00
50	10-Dec-09	16-Dec-09	1	1	29.00	2,970.00	1	0.30	29.00	2,970.00
51	17-Dec-09	23-Dec-09	0	0	0.00	0.00	0	0.00	0.00	0.00
52	24-Dec-09	31-Dec-09	0	0	0.00	0.00	0	0.00	0.00	0.00

Totals:		**1**	**1**			**1**	**0.30208**
Mission Optimization:					**0.00%**		
Pallet Optimization:					**69.79%**		

| | | | C17 | | | | TE2 (Tereen, Afghanistan) | | | |
| | | | | Original | | | | New | | |
Week			# Msns	# Pallets	Avg Height	Avg Weight	# Msns	# Pallets	Avg Height	Avg Weight
1	1-Jan-09	7-Jan-09	0	0	0.00	0.00	0	0.00	0.00	0.00
2	8-Jan-09	14-Jan-09	0	0	0.00	0.00	0	0.00	0.00	0.00
3	15-Jan-09	21-Jan-09	0	0	0.00	0.00	0	0.00	0.00	0.00
4	22-Jan-09	28-Jan-09	0	0	0.00	0.00	0	0.00	0.00	0.00
5	29-Jan-09	4-Feb-09	0	0	0.00	0.00	0	0.00	0.00	0.00
6	5-Feb-09	11-Feb-09	0	0	0.00	0.00	0	0.00	0.00	0.00
7	12-Feb-09	18-Feb-09	0	0	0.00	0.00	0	0.00	0.00	0.00
8	19-Feb-09	25-Feb-09	0	0	0.00	0.00	0	0.00	0.00	0.00
9	26-Feb-09	4-Mar-09	0	0	0.00	0.00	0	0.00	0.00	0.00
10	5-Mar-09	11-Mar-09	0	0	0.00	0.00	0	0.00	0.00	0.00
11	12-Mar-09	18-Mar-09	0	0	0.00	0.00	0	0.00	0.00	0.00
12	19-Mar-09	25-Mar-09	0	0	0.00	0.00	0	0.00	0.00	0.00
13	26-Mar-09	1-Apr-09	0	0	0.00	0.00	0	0.00	0.00	0.00
14	2-Apr-09	8-Apr-09	0	0	0.00	0.00	0	0.00	0.00	0.00
15	9-Apr-09	15-Apr-09	0	0	0.00	0.00	0	0.00	0.00	0.00
16	16-Apr-09	22-Apr-09	0	0	0.00	0.00	0	0.00	0.00	0.00
17	23-Apr-09	29-Apr-09	0	0	0.00	0.00	0	0.00	0.00	0.00
18	30-Apr-09	6-May-09	0	0	0.00	0.00	0	0.00	0.00	0.00
19	7-May-09	13-May-09	0	0	0.00	0.00	0	0.00	0.00	0.00
20	14-May-09	20-May-09	0	0	0.00	0.00	0	0.00	0.00	0.00
21	21-May-09	27-May-09	0	0	0.00	0.00	0	0.00	0.00	0.00
22	28-May-09	3-Jun-09	0	0	0.00	0.00	0	0.00	0.00	0.00
23	4-Jun-09	10-Jun-09	0	0	0.00	0.00	0	0.00	0.00	0.00
24	11-Jun-09	17-Jun-09	0	0	0.00	0.00	0	0.00	0.00	0.00
25	18-Jun-09	24-Jun-09	1	5	62.80	2,130.00	1	3.27	78.50	2,662.50
26	25-Jun-09	1-Jul-09	1	8	35.38	1,426.25	1	2.95	94.33	3,803.33
27	2-Jul-09	8-Jul-09	1	1	42.00	1,420.00	1	0.44	42.00	1,420.00
28	9-Jul-09	15-Jul-09	1	2	36.00	1,345.00	1	0.75	72.00	2,690.00
29	16-Jul-09	22-Jul-09	0	0	0.00	0.00	0	0.00	0.00	0.00
30	23-Jul-09	29-Jul-09	1	2	42.00	1,205.00	1	0.88	84.00	2,410.00
31	30-Jul-09	5-Aug-09	1	1	35.00	810.00	1	0.36	35.00	810.00
32	6-Aug-09	12-Aug-09	1	3	77.33	1,220.00	1	2.42	77.33	1,220.00
33	13-Aug-09	19-Aug-09	1	1	35.00	1,400.00	1	0.36	35.00	1,400.00
34	20-Aug-09	26-Aug-09	1	1	40.00	1,370.00	1	0.42	40.00	1,370.00
35	27-Aug-09	2-Sep-09	0	0	0.00	0.00	0	0.00	0.00	0.00
36	3-Sep-09	9-Sep-09	0	0	0.00	0.00	0	0.00	0.00	0.00
37	10-Sep-09	16-Sep-09	1	4	88.75	3,170.00	1	3.70	88.75	3,170.00
38	17-Sep-09	23-Sep-09	1	1	90.00	3,120.00	1	0.94	90.00	3,120.00
39	24-Sep-09	30-Sep-09	1	2	76.50	3,235.00	1	1.59	76.50	3,235.00
40	1-Oct-09	7-Oct-09	1	2	56.00	1,985.00	1	1.17	56.00	1,985.00
41	8-Oct-09	14-Oct-09	1	8	66.50	2,012.50	1	5.54	88.67	2,683.33
42	15-Oct-09	21-Oct-09	1	4	73.00	2,855.00	1	3.04	73.00	2,855.00
43	22-Oct-09	28-Oct-09	1	4	52.50	2,758.75	1	2.19	70.00	3,678.33
44	29-Oct-09	4-Nov-09	1	2	62.50	1,450.00	1	1.30	62.50	1,450.00
45	5-Nov-09	11-Nov-09	1	6	69.17	2,870.00	1	4.32	83.00	3,444.00

46	12-Nov-09	18-Nov-09	1	14	47.93	1,970.36	1	6.99	95.86	3,940.71
47	19-Nov-09	25-Nov-09	1	6	35.50	1,220.00	1	2.22	71.00	2,440.00
48	26-Nov-09	2-Dec-09	1	7	64.00	2,467.14	1	4.67	89.60	3,454.00
49	3-Dec-09	9-Dec-09	1	5	53.00	2,042.00	1	2.76	88.33	3,403.33
50	10-Dec-09	16-Dec-09	1	3	62.67	2,106.67	1	1.96	94.00	3,160.00
51	17-Dec-09	23-Dec-09	1	4	51.75	1,610.00	1	2.16	69.00	2,146.67
52	24-Dec-09	31-Dec-09	1	6	70.00	2,256.67	1	4.38	84.00	2,708.00
	Totals:		**25**	**102**			**25**	**60.7604**		
	Mission Optimization:						0.00%			
	Pallet Optimization:						40.43%			

Model 2 - Weekly Summary - C-17 Missions
(Incirlik AB - Afghanistan)

C17			AZ1	(Bastion Airfield, Afghanistan)							Supplemental	
				Original				New				
			#	#	Avg	Avg	#	#	Avg	Avg	#	#
Week			Msns	Pallets	Height	Weight	Msns	Pallets	Height	Weight	Msns	Pallets
1	1-Jan-09	7-Jan-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
2	8-Jan-09	14-Jan-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
3	15-Jan-09	21-Jan-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
4	22-Jan-09	28-Jan-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
5	29-Jan-09	4-Feb-09	1	13	35.92	3,353.85	1	4.86	93.40	8,720.00	0	0
6	5-Feb-09	11-Feb-09	3	52	89.35	6,927.12	3	48.40	94.82	7,351.22	0	0
7	12-Feb-09	18-Feb-09	6	98	82.99	5,483.67	5	84.72	95.68	6,322.35	0	0
8	19-Feb-09	25-Feb-09	2	33	70.21	7,622.27	2	24.14	92.68	10,061.40	0	0
9	26-Feb-09	4-Mar-09	3	41	74.24	5,975.05	2	31.71	95.13	7,655.53	0	0
10	5-Mar-09	11-Mar-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
11	12-Mar-09	18-Mar-09	1	6	69.17	3,312.50	1	4.32	83.00	3,975.00	0	0
12	19-Mar-09	25-Mar-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
13	26-Mar-09	1-Apr-09	2	36	62.47	2,755.17	2	23.43	93.71	4,132.75	0	0
14	2-Apr-09	8-Apr-09	2	33	54.55	3,214.55	2	18.75	94.74	5,583.16	0	0
15	9-Apr-09	15-Apr-09	1	8	47.38	2,782.50	1	3.95	94.75	5,565.00	0	0
16	16-Apr-09	22-Apr-09	1	14	60.36	2,912.86	1	8.80	93.89	4,531.11	0	0
17	23-Apr-09	29-Apr-09	1	1	70.00	2,210.00	1	0.73	70.00	2,210.00	0	0
18	30-Apr-09	6-May-09	2	36	59.31	2,553.06	2	22.24	92.83	3,996.09	0	0
19	7-May-09	13-May-09	2	19	56.63	2,367.11	1	11.21	89.67	3,747.92	1	10
20	14-May-09	20-May-09	2	26	73.85	3,954.23	2	20.00	96.00	5,140.50	2	48
21	21-May-09	27-May-09	5	86	55.12	2,654.88	3	49.38	94.80	4,566.40	2	62
22	28-May-09	3-Jun-09	10	172	56.69	2,693.69	6	101.57	95.60	4,542.30	1	36
23	4-Jun-09	10-Jun-09	6	106	59.22	2,930.66	4	65.39	95.11	4,706.82	0	0
24	11-Jun-09	17-Jun-09	2	22	59.73	2,788.64	1	13.69	93.86	4,382.14	1	12
25	18-Jun-09	24-Jun-09	4	58	56.62	3,240.17	2	34.21	93.83	5,369.43	1	8
26	25-Jun-09	1-Jul-09	4	70	62.16	4,243.21	3	45.32	94.59	6,457.07	1	2
27	2-Jul-09	8-Jul-09	4	63	59.48	3,644.63	3	39.03	93.68	5,740.30	1	4
28	9-Jul-09	15-Jul-09	3	45	58.36	3,074.00	2	27.35	93.79	4,940.36	1	2
29	16-Jul-09	22-Jul-09	6	103	59.59	3,733.54	4	63.94	95.91	6,008.67	1	28
30	23-Jul-09	29-Jul-09	6	96	63.41	4,037.59	4	63.41	95.11	6,056.39	2	52
31	30-Jul-09	5-Aug-09	6	98	64.06	4,342.45	4	65.40	95.12	6,447.88	2	46
32	6-Aug-09	12-Aug-09	4	66	61.20	3,806.52	3	42.07	93.93	5,842.56	1	20
33	13-Aug-09	19-Aug-09	5	80	62.49	3,911.75	3	52.07	94.32	5,904.53	1	36
34	20-Aug-09	26-Aug-09	7	112	59.60	3,914.64	4	69.53	95.36	6,263.43	1	36
35	27-Aug-09	2-Sep-09	6	98	65.83	3,501.84	4	67.20	94.87	5,046.76	1	21
36	3-Sep-09	9-Sep-09	6	92	66.27	3,110.33	4	63.51	95.27	4,471.09	1	18
37	10-Sep-09	16-Sep-09	10	174	57.75	2,606.78	6	104.68	95.70	4,319.81	1	20
38	17-Sep-09	23-Sep-09	7	109	59.59	3,329.72	4	67.66	95.51	5,337.35	2	44
39	24-Sep-09	30-Sep-09	10	173	57.30	3,759.10	6	103.26	95.32	6,253.13	1	10

			# Msns	# Pallets	Avg Height	Avg Weight	# Msns	# Pallets	Avg Height	Avg Weight	# Msns	# Pallets
40	1-Oct-09	7-Oct-09	4	70	61.43	4,390.57	3	44.79	95.56	6,829.78	1	17
41	8-Oct-09	14-Oct-09	6	98	63.82	3,745.38	4	65.15	94.76	5,561.32	1	12
42	15-Oct-09	21-Oct-09	3	54	62.00	3,587.69	2	34.88	95.66	5,535.29	1	16
43	22-Oct-09	28-Oct-09	6	106	72.20	4,034.38	5	79.72	95.66	5,345.55	1	29
44	29-Oct-09	4-Nov-09	5	81	71.90	3,908.15	4	60.67	95.48	5,189.51	1	40
45	5-Nov-09	11-Nov-09	9	151	63.40	3,781.97	6	99.72	95.73	5,710.77	1	26
46	12-Nov-09	18-Nov-09	3	42	59.57	3,999.17	2	26.06	92.67	6,220.93	1	25
47	19-Nov-09	25-Nov-09	5	74	62.23	3,695.41	3	47.97	95.94	5,697.08	2	46
48	26-Nov-09	2-Dec-09	5	87	59.33	3,377.47	3	53.77	95.59	5,441.48	2	44
49	3-Dec-09	9-Dec-09	7	123	62.61	3,131.14	5	80.22	95.07	4,754.69	1	12
50	10-Dec-09	16-Dec-09	7	112	58.73	3,330.71	4	68.52	95.33	5,406.38	1	2
51	17-Dec-09	23-Dec-09	4	64	58.81	3,180.94	3	39.21	94.10	5,089.50	0	0
52	24-Dec-09	31-Dec-09	5	90	61.31	3,348.56	4	57.48	95.14	5,196.03	0	0
Totals:			**209**	**3391**			**144**	**2204.05**				
Mission Optimization:							**31.10%**				**38**	**784**
Pallet Optimization:							**35.00%**					

C17			**KDH**	**(Kandahar, Afghanistan)**							Supplemental	
				Original				New				
			#	#	Avg	Avg	#	#	Avg	Avg	#	#
Week			Msns	Pallets	Height	Weight	Msns	Pallets	Height	Weight	Msns	Pallets
1	1-Jan-09	7-Jan-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
2	8-Jan-09	14-Jan-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
3	15-Jan-09	21-Jan-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
4	22-Jan-09	28-Jan-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
5	29-Jan-09	4-Feb-09	1	17	65.29	3,370.00	1	11.56	92.50	4,774.17	0	0
6	5-Feb-09	11-Feb-09	1	17	71.41	3,009.12	1	12.65	93.38	3,935.00	0	0
7	12-Feb-09	18-Feb-09	2	30	56.33	3,759.20	1	17.60	93.89	6,265.33	0	0
8	19-Feb-09	25-Feb-09	1	16	77.06	3,907.50	1	12.84	94.85	4,809.23	0	0
9	26-Feb-09	4-Mar-09	2	28	58.96	3,500.50	1	17.20	91.72	5,445.22	0	0
10	5-Mar-09	11-Mar-09	3	48	72.63	3,602.29	3	36.31	94.22	4,673.24	0	0
11	12-Mar-09	18-Mar-09	5	82	70.88	4,923.66	4	60.54	95.28	6,618.69	1	16
12	19-Mar-09	25-Mar-09	5	76	86.34	5,960.08	4	68.35	95.10	6,564.72	1	35
13	26-Mar-09	1-Apr-09	9	150	77.23	4,722.03	7	120.67	95.74	5,853.76	1	4
14	2-Apr-09	8-Apr-09	12	199	65.33	3,933.82	8	135.43	95.60	5,756.10	1	33
15	9-Apr-09	15-Apr-09	4	57	56.70	5,481.16	2	33.67	95.06	9,189.00	2	76
16	16-Apr-09	22-Apr-09	5	80	67.45	3,037.25	4	56.21	94.67	4,262.81	2	62
17	23-Apr-09	29-Apr-09	3	43	69.23	2,636.16	2	31.01	93.03	3,542.34	2	75
18	30-Apr-09	6-May-09	2	30	68.43	3,709.67	2	21.39	93.32	5,058.64	1	14
19	7-May-09	13-May-09	3	44	56.50	2,904.09	2	25.90	95.62	4,914.62	1	10
20	14-May-09	20-May-09	3	45	64.76	3,531.33	2	30.35	94.00	5,126.13	1	7
21	21-May-09	27-May-09	6	94	66.95	3,641.17	4	65.55	95.35	5,185.91	1	12
22	28-May-09	3-Jun-09	4	71	60.92	3,367.55	3	45.05	94.02	5,197.74	1	20
23	4-Jun-09	10-Jun-09	5	79	60.19	3,032.15	3	49.53	95.10	4,790.80	1	14
24	11-Jun-09	17-Jun-09	4	62	66.77	3,455.81	3	43.13	94.09	4,869.55	1	12
25	18-Jun-09	24-Jun-09	4	58	66.62	3,652.07	3	40.25	94.24	5,166.34	1	2
26	25-Jun-09	1-Jul-09	4	69	61.00	3,192.67	3	43.84	95.66	5,006.68	1	12
27	2-Jul-09	8-Jul-09	5	75	63.27	3,714.93	3	49.43	94.90	5,572.40	1	32
28	9-Jul-09	15-Jul-09	6	99	66.60	3,579.39	4	68.68	95.55	5,135.65	1	15

Week	Start	End	# Msns	# Pallets	Avg Height	Avg Weight	# Msns	# Pallets	Avg Height	Avg Weight	# Msns	# Pallets
29	16-Jul-09	22-Jul-09	4	64	65.77	3,832.56	3	43.84	95.66	5,574.64	2	47
30	23-Jul-09	29-Jul-09	5	80	65.18	3,537.69	4	54.31	94.80	5,145.73	2	46
31	30-Jul-09	5-Aug-09	5	80	69.28	3,874.25	4	57.73	95.55	5,343.79	1	10
32	6-Aug-09	12-Aug-09	3	44	67.16	4,609.55	2	30.78	95.32	6,542.58	1	20
33	13-Aug-09	19-Aug-09	6	102	66.00	3,163.38	4	70.13	94.82	4,544.58	1	29
34	20-Aug-09	26-Aug-09	7	109	59.40	3,231.01	4	67.45	95.22	5,179.12	1	15
35	27-Aug-09	2-Sep-09	7	119	65.42	4,348.00	5	81.09	94.94	6,309.90	1	4
36	3-Sep-09	9-Sep-09	7	124	65.23	4,200.42	5	84.25	95.15	6,127.67	1	5
37	10-Sep-09	16-Sep-09	5	73	62.59	3,714.32	3	47.59	95.19	5,648.85	1	6
38	17-Sep-09	23-Sep-09	5	80	66.83	3,761.76	4	55.69	95.46	5,373.95	1	8
39	24-Sep-09	30-Sep-09	7	113	63.03	4,540.62	5	74.19	94.96	6,841.20	1	24
40	1-Oct-09	7-Oct-09	5	81	57.83	3,951.40	3	48.79	95.59	6,531.90	2	43
41	8-Oct-09	14-Oct-09	10	179	67.21	3,958.78	7	125.31	95.48	5,623.98	1	40
42	15-Oct-09	21-Oct-09	7	113	69.65	4,028.08	5	81.99	95.99	5,550.89	1	5
43	22-Oct-09	28-Oct-09	5	82	71.79	4,221.89	4	61.32	94.95	5,583.79	1	30
44	29-Oct-09	4-Nov-09	3	42	71.88	3,662.98	2	31.45	94.34	4,807.66	1	12
45	5-Nov-09	11-Nov-09	9	157	66.27	4,191.31	7	108.38	95.45	6,037.02	1	31
46	12-Nov-09	18-Nov-09	11	197	69.00	3,872.15	8	141.59	95.73	5,371.93	1	24
47	19-Nov-09	25-Nov-09	8	130	67.74	3,859.79	6	91.73	95.72	5,454.05	1	20
48	26-Nov-09	2-Dec-09	10	176	65.26	4,478.76	7	119.64	95.71	6,568.84	0	0
49	3-Dec-09	9-Dec-09	7	113	67.22	4,035.18	5	79.13	94.95	5,699.69	1	12
50	10-Dec-09	16-Dec-09	7	123	69.12	4,241.71	5	88.56	95.53	5,862.13	1	33
51	17-Dec-09	23-Dec-09	7	118	66.67	4,058.69	5	81.95	95.94	5,840.55	1	26
52	24-Dec-09	31-Dec-09	6	107	74.94	4,253.62	5	83.53	95.46	5,418.30	1	9
Totals:			**255**	**4175**			**183**	**2907.55**				
Mission Optimization:								**28.24%**			**47**	**950**
Pallet Optimization:								**30.36%**				

C17			**OA1**	(Bagram AB, Afghanistan)								
				Original				New			Supplemental	
			#	#	Avg	Avg	#	#	Avg	Avg	#	#
Week			Msns	Pallets	Height	Weight	Msns	Pallets	Height	Weight	Msns	Pallets
1	1-Jan-09	7-Jan-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
2	8-Jan-09	14-Jan-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
3	15-Jan-09	21-Jan-09	1	12	38.00	5,582.17	1	4.75	91.20	13,397.20	0	0
4	22-Jan-09	28-Jan-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
5	29-Jan-09	4-Feb-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
6	5-Feb-09	11-Feb-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
7	12-Feb-09	18-Feb-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
8	19-Feb-09	25-Feb-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
9	26-Feb-09	4-Mar-09	1	3	59.00	1,568.33	1	1.84	88.50	2,352.50	0	0
10	5-Mar-09	11-Mar-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
11	12-Mar-09	18-Mar-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
12	19-Mar-09	25-Mar-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
13	26-Mar-09	1-Apr-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
14	2-Apr-09	8-Apr-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
15	9-Apr-09	15-Apr-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
16	16-Apr-09	22-Apr-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
17	23-Apr-09	29-Apr-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0

Week			# Msns	# Pallets	Avg Height	Avg Weight	# Msns	# Pallets	Avg Height	Avg Weight	# Msns	# Pallets
18	30-Apr-09	6-May-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
19	7-May-09	13-May-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
20	14-May-09	20-May-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
21	21-May-09	27-May-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
22	28-May-09	3-Jun-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
23	4-Jun-09	10-Jun-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
24	11-Jun-09	17-Jun-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
25	18-Jun-09	24-Jun-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
26	25-Jun-09	1-Jul-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
27	2-Jul-09	8-Jul-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
28	9-Jul-09	15-Jul-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
29	16-Jul-09	22-Jul-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
30	23-Jul-09	29-Jul-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
31	30-Jul-09	5-Aug-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
32	6-Aug-09	12-Aug-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
33	13-Aug-09	19-Aug-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
34	20-Aug-09	26-Aug-09	1	5	91.80	6,842.00	1	4.78	91.80	6,842.00	0	0
35	27-Aug-09	2-Sep-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
36	3-Sep-09	9-Sep-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
37	10-Sep-09	16-Sep-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
38	17-Sep-09	23-Sep-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
39	24-Sep-09	30-Sep-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
40	1-Oct-09	7-Oct-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
41	8-Oct-09	14-Oct-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
42	15-Oct-09	21-Oct-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
43	22-Oct-09	28-Oct-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
44	29-Oct-09	4-Nov-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
45	5-Nov-09	11-Nov-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
46	12-Nov-09	18-Nov-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
47	19-Nov-09	25-Nov-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
48	26-Nov-09	2-Dec-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
49	3-Dec-09	9-Dec-09	1	1	56.00	2,390.00	1	0.58	56.00	2,390.00	0	0
50	10-Dec-09	16-Dec-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
51	17-Dec-09	23-Dec-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
52	24-Dec-09	31-Dec-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
	Totals:		**4**	**21**			**4**	**11.9583**				
	Mission Optimization:				**0.00%**						**0**	**0**
	Pallet Optimization:				**43.06%**							

C17			**OA4**	(Salernio, Afghanistan)								
				Original				**New**			Supplemental	
			#	#	Avg	Avg	#	#	Avg	Avg	#	#
Week			**Msns**	**Pallets**	**Height**	**Weight**	**Msns**	**Pallets**	**Height**	**Weight**	**Msns**	**Pallets**
1	1-Jan-09	7-Jan-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
2	8-Jan-09	14-Jan-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
3	15-Jan-09	21-Jan-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
4	22-Jan-09	28-Jan-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
5	29-Jan-09	4-Feb-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
6	5-Feb-09	11-Feb-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0

7	12-Feb-09	18-Feb-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
8	19-Feb-09	25-Feb-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
9	26-Feb-09	4-Mar-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
10	5-Mar-09	11-Mar-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
11	12-Mar-09	18-Mar-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
12	19-Mar-09	25-Mar-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
13	26-Mar-09	1-Apr-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
14	2-Apr-09	8-Apr-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
15	9-Apr-09	15-Apr-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
16	16-Apr-09	22-Apr-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
17	23-Apr-09	29-Apr-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
18	30-Apr-09	6-May-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
19	7-May-09	13-May-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
20	14-May-09	20-May-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
21	21-May-09	27-May-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
22	28-May-09	3-Jun-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
23	4-Jun-09	10-Jun-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
24	11-Jun-09	17-Jun-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
25	18-Jun-09	24-Jun-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
26	25-Jun-09	1-Jul-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
27	2-Jul-09	8-Jul-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
28	9-Jul-09	15-Jul-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
29	16-Jul-09	22-Jul-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
30	23-Jul-09	29-Jul-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
31	30-Jul-09	5-Aug-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
32	6-Aug-09	12-Aug-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
33	13-Aug-09	19-Aug-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
34	20-Aug-09	26-Aug-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
35	27-Aug-09	2-Sep-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
36	3-Sep-09	9-Sep-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
37	10-Sep-09	16-Sep-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
38	17-Sep-09	23-Sep-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
39	24-Sep-09	30-Sep-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
40	1-Oct-09	7-Oct-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
41	8-Oct-09	14-Oct-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
42	15-Oct-09	21-Oct-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
43	22-Oct-09	28-Oct-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
44	29-Oct-09	4-Nov-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
45	5-Nov-09	11-Nov-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
46	12-Nov-09	18-Nov-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
47	19-Nov-09	25-Nov-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
48	26-Nov-09	2-Dec-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
49	3-Dec-09	9-Dec-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
50	10-Dec-09	16-Dec-09	1	1	29.00	2,970.00	1	0.30	29.00	2,970.00	0	0
51	17-Dec-09	23-Dec-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
52	24-Dec-09	31-Dec-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0

Totals: 1 1 1 0.30208

Mission Optimization: 0.00% 0 0

Pallet Optimization: 69.79%

	C17		TE2	(Tereen, Afghanistan)							Supplemental	
				Original				New				
			#	#	Avg	Avg	#	#	Avg	Avg	#	#
Week			Msns	Pallets	Height	Weight	Msns	Pallets	Height	Weight	Msns	Pallets
1	1-Jan-09	7-Jan-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
2	8-Jan-09	14-Jan-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
3	15-Jan-09	21-Jan-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
4	22-Jan-09	28-Jan-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
5	29-Jan-09	4-Feb-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
6	5-Feb-09	11-Feb-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
7	12-Feb-09	18-Feb-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
8	19-Feb-09	25-Feb-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
9	26-Feb-09	4-Mar-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
10	5-Mar-09	11-Mar-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
11	12-Mar-09	18-Mar-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
12	19-Mar-09	25-Mar-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
13	26-Mar-09	1-Apr-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
14	2-Apr-09	8-Apr-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
15	9-Apr-09	15-Apr-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
16	16-Apr-09	22-Apr-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
17	23-Apr-09	29-Apr-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
18	30-Apr-09	6-May-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
19	7-May-09	13-May-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
20	14-May-09	20-May-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
21	21-May-09	27-May-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
22	28-May-09	3-Jun-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
23	4-Jun-09	10-Jun-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
24	11-Jun-09	17-Jun-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
25	18-Jun-09	24-Jun-09	1	5	62.80	2,130.00	1	3.27	78.50	2,662.50	0	0
26	25-Jun-09	1-Jul-09	1	4	58.75	1,680.00	1	2.45	78.33	2,240.00	1	4
27	2-Jul-09	8-Jul-09	1	1	42.00	1,420.00	1	0.44	42.00	1,420.00	0	0
28	9-Jul-09	15-Jul-09	1	2	36.00	1,345.00	1	0.75	72.00	2,690.00	0	0
29	16-Jul-09	22-Jul-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
30	23-Jul-09	29-Jul-09	1	2	42.00	1,205.00	1	0.88	84.00	2,410.00	0	0
31	30-Jul-09	5-Aug-09	1	1	35.00	810.00	1	0.36	35.00	810.00	0	0
32	6-Aug-09	12-Aug-09	1	3	77.33	1,220.00	1	2.42	77.33	1,220.00	0	0
33	13-Aug-09	19-Aug-09	1	1	35.00	1,400.00	1	0.36	35.00	1,400.00	0	0
34	20-Aug-09	26-Aug-09	1	1	40.00	1,370.00	1	0.42	40.00	1,370.00	0	0
35	27-Aug-09	2-Sep-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
36	3-Sep-09	9-Sep-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
37	10-Sep-09	16-Sep-09	1	4	88.75	3,170.00	1	3.70	88.75	3,170.00	0	0
38	17-Sep-09	23-Sep-09	1	1	90.00	3,120.00	1	0.94	90.00	3,120.00	0	0
39	24-Sep-09	30-Sep-09	1	2	76.50	3,235.00	1	1.59	76.50	3,235.00	0	0
40	1-Oct-09	7-Oct-09	1	2	56.00	1,985.00	1	1.17	56.00	1,985.00	0	0
41	8-Oct-09	14-Oct-09	1	8	66.50	2,012.50	1	5.54	88.67	2,683.33	0	0
42	15-Oct-09	21-Oct-09	1	4	73.00	2,855.00	1	3.04	73.00	2,855.00	0	0
43	22-Oct-09	28-Oct-09	1	4	52.50	2,758.75	1	2.19	70.00	3,678.33	0	0
44	29-Oct-09	4-Nov-09	1	2	62.50	1,450.00	1	1.30	62.50	1,450.00	0	0
45	5-Nov-09	11-Nov-09	1	6	69.17	2,870.00	1	4.32	83.00	3,444.00	0	0

46	12-Nov-09	18-Nov-09	1	10	62.40	2,240.50	1	6.50	89.14	3,200.71	1	4
47	19-Nov-09	25-Nov-09	1	3	60.00	1,566.67	1	1.88	90.00	2,350.00	1	3
48	26-Nov-09	2-Dec-09	1	7	64.00	2,467.14	1	4.67	89.60	3,454.00	0	0
49	3-Dec-09	9-Dec-09	1	5	53.00	2,042.00	1	2.76	88.33	3,403.33	0	0
50	10-Dec-09	16-Dec-09	1	3	62.67	2,106.67	1	1.96	94.00	3,160.00	0	0
51	17-Dec-09	23-Dec-09	1	4	51.75	1,610.00	1	2.16	69.00	2,146.67	0	0
52	24-Dec-09	31-Dec-09	1	6	70.00	2,256.67	1	4.38	84.00	2,708.00	0	0
	Totals:		**25**	**91**			**25**	**59.4271**				
	Mission Optimization:						**0.00%**				**3**	**11**
	Pallet Optimization:						**34.70%**					

Model 3 - Weekly Summary - C-17 Missions
(Incirlik AB - Afghanistan)

			AZ1	(Bastion Airfield, Afghanistan)							Supplemental	
C17				Original				New				
			#	#	Avg	Avg	#	#	Avg	Avg	#	#
Week			Msns	Pallets	Height	Weight	Msns	Pallets	Height	Weight	Msns	Pallets
1	1-Jan-09	7-Jan-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
2	8-Jan-09	14-Jan-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
3	15-Jan-09	21-Jan-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
4	22-Jan-09	28-Jan-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
5	29-Jan-09	4-Feb-09	1	1	54.00	5,280.00	1	0.56	54.00	5,280.00	1	12
6	5-Feb-09	11-Feb-09	3	50	91.54	7,082.60	3	47.68	95.35	7,377.71	1	2
7	12-Feb-09	18-Feb-09	6	91	87.37	5,619.29	5	82.82	95.80	6,160.90	1	7
8	19-Feb-09	25-Feb-09	2	33	70.21	7,622.27	2	24.14	92.68	10,061.40	0	0
9	26-Feb-09	4-Mar-09	2	26	94.35	7,018.15	2	25.55	94.35	7,018.15	1	15
10	5-Mar-09	11-Mar-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
11	12-Mar-09	18-Mar-09	1	5	74.00	3,667.00	1	3.85	92.50	4,583.75	1	1
12	19-Mar-09	25-Mar-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
13	26-Mar-09	1-Apr-09	2	29	67.14	2,826.41	2	20.28	92.71	3,903.14	1	7
14	2-Apr-09	8-Apr-09	1	18	63.67	3,273.89	1	11.94	95.50	4,910.83	1	15
15	9-Apr-09	15-Apr-09	1	1	65.00	1,960.00	1	0.68	65.00	1,960.00	1	7
16	16-Apr-09	22-Apr-09	1	7	79.00	3,972.86	1	5.76	92.17	4,635.00	1	7
17	23-Apr-09	29-Apr-09	1	1	70.00	2,210.00	1	0.73	70.00	2,210.00	0	0
18	30-Apr-09	6-May-09	2	25	67.28	2,811.60	1	17.52	93.44	3,905.00	1	11
19	7-May-09	13-May-09	1	12	63.33	2,600.42	1	7.92	95.00	3,900.63	1	17
20	14-May-09	20-May-09	2	26	73.85	3,954.23	2	20.00	96.00	5,140.50	2	48
21	21-May-09	27-May-09	4	72	57.94	2,732.22	3	43.46	94.82	4,470.91	2	76
22	28-May-09	3-Jun-09	9	148	59.07	2,726.05	6	91.07	95.03	4,385.38	2	60
23	4-Jun-09	10-Jun-09	6	96	61.29	3,047.08	4	61.29	94.90	4,718.06	1	10
24	11-Jun-09	17-Jun-09	1	16	67.38	3,234.38	1	11.23	89.83	4,312.50	1	18
25	18-Jun-09	24-Jun-09	2	32	67.53	3,569.06	2	22.51	93.96	4,965.65	1	34
26	25-Jun-09	1-Jul-09	3	49	71.08	4,476.53	3	36.28	94.14	5,928.38	1	23
27	2-Jul-09	8-Jul-09	3	44	66.86	4,041.32	2	30.65	94.90	5,736.06	1	23
28	9-Jul-09	15-Jul-09	2	31	65.48	3,415.16	2	21.15	92.27	4,812.27	1	16
29	16-Jul-09	22-Jul-09	5	74	67.68	4,106.08	3	52.17	94.49	5,733.02	2	57
30	23-Jul-09	29-Jul-09	4	63	76.17	4,544.13	3	49.99	95.98	5,725.60	3	85
31	30-Jul-09	5-Aug-09	4	71	74.52	4,992.39	4	55.11	94.48	6,329.64	2	73
32	6-Aug-09	12-Aug-09	3	52	66.42	4,023.46	2	35.98	95.94	5,811.67	1	34
33	13-Aug-09	19-Aug-09	4	55	72.55	3,991.82	3	41.56	95.00	5,227.38	2	61
34	20-Aug-09	26-Aug-09	4	70	71.07	4,166.00	3	51.82	95.67	5,608.08	2	78
35	27-Aug-09	2-Sep-09	5	74	74.49	3,719.46	4	57.42	95.03	4,745.52	2	45
36	3-Sep-09	9-Sep-09	5	74	72.54	3,170.81	4	55.92	95.86	4,190.00	1	36
37	10-Sep-09	16-Sep-09	6	92	69.72	3,140.65	4	66.81	95.73	4,312.54	3	102
38	17-Sep-09	23-Sep-09	4	65	71.02	3,740.31	3	48.08	94.20	4,961.63	3	88
39	24-Sep-09	30-Sep-09	7	117	65.18	3,960.56	5	79.44	95.33	5,792.31	2	66

Week			# Msns	# Pallets	Avg Height	Avg Weight	# Msns	# Pallets	Avg Height	Avg Weight	# Msns	# Pallets
40	1-Oct-09	7-Oct-09	3	47	72.87	5,162.87	2	35.68	95.14	6,740.42	1	40
41	8-Oct-09	14-Oct-09	5	80	68.25	3,468.81	4	56.88	95.79	4,868.51	1	30
42	15-Oct-09	21-Oct-09	3	42	67.57	3,647.26	2	29.56	94.60	5,106.17	1	28
43	22-Oct-09	28-Oct-09	5	90	77.67	4,237.93	5	72.81	95.75	5,224.85	2	45
44	29-Oct-09	4-Nov-09	4	65	79.35	4,163.38	3	53.73	95.52	5,011.48	2	56
45	5-Nov-09	11-Nov-09	7	115	71.50	3,910.32	5	85.65	95.60	5,228.92	2	62
46	12-Nov-09	18-Nov-09	2	32	66.72	4,127.66	2	22.24	92.83	5,742.83	1	35
47	19-Nov-09	25-Nov-09	3	49	72.78	3,862.45	3	37.15	93.84	4,980.53	2	71
48	26-Nov-09	2-Dec-09	4	66	65.92	3,254.85	3	45.32	94.59	4,670.00	2	65
49	3-Dec-09	9-Dec-09	5	88	71.36	3,296.48	4	65.42	95.15	4,395.30	2	47
50	10-Dec-09	16-Dec-09	5	83	65.76	3,471.57	4	56.85	95.75	5,055.09	1	31
51	17-Dec-09	23-Dec-09	3	50	65.12	3,115.80	2	33.92	95.76	4,582.06	1	14
52	24-Dec-09	31-Dec-09	4	58	74.45	3,520.09	3	44.98	95.96	4,537.00	1	32
Totals:			**160**	**2485**			**127**	**1821.54**				
Mission Optimization:							**20.63%**				**65**	**1,690**
Pallet Optimization:							**26.70%**					

C17			**KDH**	**(Kandahar, Afghanistan)**								
				Original				New			Supplemental	
			#	#	Avg	Avg	#	#	Avg	Avg	#	#
Week			Msns	Pallets	Height	Weight	Msns	Pallets	Height	Weight	Msns	Pallets
1	1-Jan-09	7-Jan-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
2	8-Jan-09	14-Jan-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
3	15-Jan-09	21-Jan-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
4	22-Jan-09	28-Jan-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
5	29-Jan-09	4-Feb-09	1	14	71.21	3,749.29	1	10.39	90.64	4,771.82	1	3
6	5-Feb-09	11-Feb-09	1	13	80.00	3,466.15	1	10.83	94.55	4,096.36	1	4
7	12-Feb-09	18-Feb-09	1	17	68.18	4,169.18	1	12.07	89.15	5,452.00	1	13
8	19-Feb-09	25-Feb-09	1	14	82.79	4,207.50	1	12.07	89.15	4,531.15	1	2
9	26-Feb-09	4-Mar-09	2	20	65.85	3,974.45	1	13.72	94.07	5,677.79	1	8
10	5-Mar-09	11-Mar-09	3	46	74.04	3,691.09	2	35.48	94.61	4,716.39	1	2
11	12-Mar-09	18-Mar-09	4	65	78.88	5,389.08	3	53.41	94.94	6,486.85	1	33
12	19-Mar-09	25-Mar-09	5	75	86.85	5,987.41	4	67.85	95.79	6,603.76	1	36
13	26-Mar-09	1-Apr-09	8	136	80.84	4,828.05	7	114.52	95.60	5,709.70	1	18
14	2-Apr-09	8-Apr-09	10	179	68.15	4,057.71	8	127.06	95.30	5,674.45	2	53
15	9-Apr-09	15-Apr-09	3	37	68.24	6,222.86	2	26.30	93.52	8,527.63	3	96
16	16-Apr-09	22-Apr-09	4	72	70.21	3,156.81	3	52.66	95.38	4,288.49	2	70
17	23-Apr-09	29-Apr-09	2	36	74.83	2,837.50	2	28.06	92.90	3,522.41	2	82
18	30-Apr-09	6-May-09	2	26	72.42	3,925.77	2	19.61	94.15	5,103.50	1	18
19	7-May-09	13-May-09	2	22	71.36	3,644.55	1	16.35	92.35	4,716.47	1	32
20	14-May-09	20-May-09	2	31	75.81	3,982.58	2	24.48	94.00	4,938.40	1	21
21	21-May-09	27-May-09	5	73	74.81	4,113.84	4	56.89	95.81	5,268.60	1	33
22	28-May-09	3-Jun-09	3	45	73.29	3,826.36	2	34.35	94.23	4,919.60	2	46
23	4-Jun-09	10-Jun-09	4	60	66.32	3,254.50	3	41.45	94.74	4,649.29	1	33
24	11-Jun-09	17-Jun-09	3	50	72.72	3,773.20	3	37.88	95.68	4,964.74	1	24
25	18-Jun-09	24-Jun-09	3	42	77.36	4,052.14	2	33.84	95.56	5,005.59	1	18
26	25-Jun-09	1-Jul-09	3	51	67.53	3,487.82	2	35.88	95.67	4,941.08	1	30
27	2-Jul-09	8-Jul-09	4	60	69.32	3,991.33	3	43.32	94.52	5,442.73	2	47
28	9-Jul-09	15-Jul-09	5	77	73.96	4,014.94	4	59.32	94.92	5,152.50	1	37

#	Start	End	# Msns	# Pallets	Avg Height	Avg Weight	# Msns	# Pallets	Avg Height	Avg Weight	# Msns	# Pallets
29	16-Jul-09	22-Jul-09	3	51	71.90	4,144.98	3	38.20	94.03	5,420.36	2	60
30	23-Jul-09	29-Jul-09	4	61	72.48	3,713.44	3	46.05	94.06	4,819.57	2	65
31	30-Jul-09	5-Aug-09	4	64	76.66	4,248.59	3	51.10	94.35	5,229.04	1	26
32	6-Aug-09	12-Aug-09	3	37	71.68	4,635.41	2	27.63	94.71	6,125.36	1	27
33	13-Aug-09	19-Aug-09	5	82	71.84	3,398.96	4	61.36	95.02	4,495.40	2	49
34	20-Aug-09	26-Aug-09	4	63	71.24	3,250.16	3	46.75	95.49	4,356.60	2	61
35	27-Aug-09	2-Sep-09	5	81	75.86	4,578.91	4	64.01	94.54	5,706.03	1	42
36	3-Sep-09	9-Sep-09	6	100	71.20	4,473.42	5	74.17	94.93	5,964.56	1	29
37	10-Sep-09	16-Sep-09	3	53	69.40	3,849.62	3	38.31	94.31	5,231.54	1	26
38	17-Sep-09	23-Sep-09	4	60	75.80	4,144.02	3	47.38	94.75	5,180.02	1	28
39	24-Sep-09	30-Sep-09	5	75	74.25	4,746.80	4	58.01	94.39	6,034.07	2	62
40	1-Oct-09	7-Oct-09	4	60	63.47	3,861.72	3	39.67	95.20	5,792.58	2	64
41	8-Oct-09	14-Oct-09	8	143	73.85	4,261.26	7	110.00	96.00	5,539.64	2	76
42	15-Oct-09	21-Oct-09	6	99	73.62	4,298.92	5	75.92	95.89	5,599.91	1	19
43	22-Oct-09	28-Oct-09	4	70	77.20	4,368.29	4	56.29	94.81	5,364.56	1	42
44	29-Oct-09	4-Nov-09	2	33	81.91	4,219.24	2	28.16	93.21	4,801.21	1	21
45	5-Nov-09	11-Nov-09	7	120	73.83	4,329.29	6	92.28	95.26	5,586.18	2	68
46	12-Nov-09	18-Nov-09	9	161	75.32	3,994.27	8	126.31	95.48	5,063.61	2	60
47	19-Nov-09	25-Nov-09	6	105	73.39	3,705.31	5	80.27	95.14	4,803.19	2	45
48	26-Nov-09	2-Dec-09	8	137	71.12	4,397.12	6	101.50	95.53	5,905.94	1	39
49	3-Dec-09	9-Dec-09	6	95	72.04	4,281.42	4	71.29	95.06	5,649.10	1	30
50	10-Dec-09	16-Dec-09	6	101	74.89	4,473.96	5	78.79	95.75	5,719.87	2	55
51	17-Dec-09	23-Dec-09	5	84	77.69	4,714.23	4	67.98	95.97	5,823.46	2	60
52	24-Dec-09	31-Dec-09	5	90	81.12	4,587.19	5	76.05	94.82	5,361.65	1	26
Totals:			**203**	**3286**			**165**	**2525.28**				
Mission Optimization:							**18.72%**				**67**	**1,839**
Pallet Optimization:							**23.15%**					

C17			OA1	(Bagram AB, Afghanistan)								
			Original				New				Supplemental	
			#	#	Avg	Avg	#	#	Avg	Avg	#	#
Week			Msns	Pallets	Height	Weight	Msns	Pallets	Height	Weight	Msns	Pallets
1	1-Jan-09	7-Jan-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
2	8-Jan-09	14-Jan-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
3	15-Jan-09	21-Jan-09	1	1	50.00	1,957.00	1	0.52	50.00	1,957.00	1	11
4	22-Jan-09	28-Jan-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
5	29-Jan-09	4-Feb-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
6	5-Feb-09	11-Feb-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
7	12-Feb-09	18-Feb-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
8	19-Feb-09	25-Feb-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
9	26-Feb-09	4-Mar-09	1	3	59.00	1,568.33	1	1.84	88.50	2,352.50	0	0
10	5-Mar-09	11-Mar-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
11	12-Mar-09	18-Mar-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
12	19-Mar-09	25-Mar-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
13	26-Mar-09	1-Apr-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
14	2-Apr-09	8-Apr-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
15	9-Apr-09	15-Apr-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
16	16-Apr-09	22-Apr-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
17	23-Apr-09	29-Apr-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0

Week			# Msns	# Pallets	Avg Height	Avg Weight	# Msns	# Pallets	Avg Height	Avg Weight	# Msns	# Pallets
18	30-Apr-09	6-May-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
19	7-May-09	13-May-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
20	14-May-09	20-May-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
21	21-May-09	27-May-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
22	28-May-09	3-Jun-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
23	4-Jun-09	10-Jun-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
24	11-Jun-09	17-Jun-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
25	18-Jun-09	24-Jun-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
26	25-Jun-09	1-Jul-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
27	2-Jul-09	8-Jul-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
28	9-Jul-09	15-Jul-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
29	16-Jul-09	22-Jul-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
30	23-Jul-09	29-Jul-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
31	30-Jul-09	5-Aug-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
32	6-Aug-09	12-Aug-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
33	13-Aug-09	19-Aug-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
34	20-Aug-09	26-Aug-09	1	5	91.80	6,842.00	1	4.78	91.80	6,842.00	0	0
35	27-Aug-09	2-Sep-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
36	3-Sep-09	9-Sep-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
37	10-Sep-09	16-Sep-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
38	17-Sep-09	23-Sep-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
39	24-Sep-09	30-Sep-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
40	1-Oct-09	7-Oct-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
41	8-Oct-09	14-Oct-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
42	15-Oct-09	21-Oct-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
43	22-Oct-09	28-Oct-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
44	29-Oct-09	4-Nov-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
45	5-Nov-09	11-Nov-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
46	12-Nov-09	18-Nov-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
47	19-Nov-09	25-Nov-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
48	26-Nov-09	2-Dec-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
49	3-Dec-09	9-Dec-09	1	1	56.00	2,390.00	1	0.58	56.00	2,390.00	0	0
50	10-Dec-09	16-Dec-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
51	17-Dec-09	23-Dec-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
52	24-Dec-09	31-Dec-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
Totals:			**4**	**10**			**4**	**7.72917**				
Mission Optimization:					**0.00%**						**1**	**11**
Pallet Optimization:					**22.71%**							

C17			OA4 (Salernio, Afghanistan)									
			Original				New				Supplemental	
Week			# Msns	# Pallets	Avg Height	Avg Weight	# Msns	# Pallets	Avg Height	Avg Weight	# Msns	# Pallets
1	1-Jan-09	7-Jan-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
2	8-Jan-09	14-Jan-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
3	15-Jan-09	21-Jan-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
4	22-Jan-09	28-Jan-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
5	29-Jan-09	4-Feb-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
6	5-Feb-09	11-Feb-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0

7	12-Feb-09	18-Feb-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
8	19-Feb-09	25-Feb-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
9	26-Feb-09	4-Mar-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
10	5-Mar-09	11-Mar-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
11	12-Mar-09	18-Mar-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
12	19-Mar-09	25-Mar-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
13	26-Mar-09	1-Apr-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
14	2-Apr-09	8-Apr-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
15	9-Apr-09	15-Apr-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
16	16-Apr-09	22-Apr-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
17	23-Apr-09	29-Apr-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
18	30-Apr-09	6-May-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
19	7-May-09	13-May-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
20	14-May-09	20-May-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
21	21-May-09	27-May-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
22	28-May-09	3-Jun-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
23	4-Jun-09	10-Jun-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
24	11-Jun-09	17-Jun-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
25	18-Jun-09	24-Jun-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
26	25-Jun-09	1-Jul-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
27	2-Jul-09	8-Jul-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
28	9-Jul-09	15-Jul-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
29	16-Jul-09	22-Jul-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
30	23-Jul-09	29-Jul-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
31	30-Jul-09	5-Aug-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
32	6-Aug-09	12-Aug-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
33	13-Aug-09	19-Aug-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
34	20-Aug-09	26-Aug-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
35	27-Aug-09	2-Sep-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
36	3-Sep-09	9-Sep-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
37	10-Sep-09	16-Sep-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
38	17-Sep-09	23-Sep-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
39	24-Sep-09	30-Sep-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
40	1-Oct-09	7-Oct-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
41	8-Oct-09	14-Oct-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
42	15-Oct-09	21-Oct-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
43	22-Oct-09	28-Oct-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
44	29-Oct-09	4-Nov-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
45	5-Nov-09	11-Nov-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
46	12-Nov-09	18-Nov-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
47	19-Nov-09	25-Nov-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
48	26-Nov-09	2-Dec-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
49	3-Dec-09	9-Dec-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
50	10-Dec-09	16-Dec-09	0	0	0.00	0.00	0	0.00	0.00	0.00	1	1
51	17-Dec-09	23-Dec-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
52	24-Dec-09	31-Dec-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
Totals:			**0**	**0**			**0**	**0**				
Mission Optimization:							**0.00%**				**1**	**1**
Pallet Optimization:							**0.00%**					

			C17				**TE2**	(Tereen, Afghanistan)				**Supplemental**	
							Original				**New**				
							#	#	Avg	Avg	#	#	Avg	Avg	#	#
Week					Msns	Pallets	Height	Weight	Msns	Pallets	Height	Weight	Msns	Pallets
1	1-Jan-09	7-Jan-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
2	8-Jan-09	14-Jan-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
3	15-Jan-09	21-Jan-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
4	22-Jan-09	28-Jan-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
5	29-Jan-09	4-Feb-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
6	5-Feb-09	11-Feb-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
7	12-Feb-09	18-Feb-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
8	19-Feb-09	25-Feb-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
9	26-Feb-09	4-Mar-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
10	5-Mar-09	11-Mar-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
11	12-Mar-09	18-Mar-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
12	19-Mar-09	25-Mar-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
13	26-Mar-09	1-Apr-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
14	2-Apr-09	8-Apr-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
15	9-Apr-09	15-Apr-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
16	16-Apr-09	22-Apr-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
17	23-Apr-09	29-Apr-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
18	30-Apr-09	6-May-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
19	7-May-09	13-May-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
20	14-May-09	20-May-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
21	21-May-09	27-May-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
22	28-May-09	3-Jun-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
23	4-Jun-09	10-Jun-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
24	11-Jun-09	17-Jun-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
25	18-Jun-09	24-Jun-09	1	4	66.50	2,225.00	1	2.77	88.67	2,966.67	1	1
26	25-Jun-09	1-Jul-09	1	2	72.00	2,280.00	1	1.50	72.00	2,280.00	1	6
27	2-Jul-09	8-Jul-09	0	0	0.00	0.00	0	0.00	0.00	0.00	1	1
28	9-Jul-09	15-Jul-09	0	0	0.00	0.00	0	0.00	0.00	0.00	1	2
29	16-Jul-09	22-Jul-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
30	23-Jul-09	29-Jul-09	0	0	0.00	0.00	0	0.00	0.00	0.00	1	2
31	30-Jul-09	5-Aug-09	0	0	0.00	0.00	0	0.00	0.00	0.00	1	1
32	6-Aug-09	12-Aug-09	1	2	100.00	1,210.00	1	2.08	66.67	806.67	1	1
33	13-Aug-09	19-Aug-09	0	0	0.00	0.00	0	0.00	0.00	0.00	1	1
34	20-Aug-09	26-Aug-09	0	0	0.00	0.00	0	0.00	0.00	0.00	1	1
35	27-Aug-09	2-Sep-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
36	3-Sep-09	9-Sep-09	0	0	0.00	0.00	0	0.00	0.00	0.00	0	0
37	10-Sep-09	16-Sep-09	1	4	88.75	3,170.00	1	3.70	88.75	3,170.00	0	0
38	17-Sep-09	23-Sep-09	1	1	90.00	3,120.00	1	0.94	90.00	3,120.00	0	0
39	24-Sep-09	30-Sep-09	1	2	76.50	3,235.00	1	1.59	76.50	3,235.00	0	0
40	1-Oct-09	7-Oct-09	1	1	65.00	2,260.00	1	0.68	65.00	2,260.00	1	1
41	8-Oct-09	14-Oct-09	1	6	73.83	2,408.33	1	4.61	88.60	2,890.00	1	2
42	15-Oct-09	21-Oct-09	1	4	73.00	2,855.00	1	3.04	73.00	2,855.00	0	0
43	22-Oct-09	28-Oct-09	1	2	61.00	1,995.00	1	1.27	61.00	1,995.00	1	2
44	29-Oct-09	4-Nov-09	1	2	62.50	1,450.00	1	1.30	62.50	1,450.00	0	0
45	5-Nov-09	11-Nov-09	1	5	74.40	3,076.00	1	3.88	93.00	3,845.00	1	1

99

46	12-Nov-09	18-Nov-09	1	6	75.00	2,917.50	1	4.69	90.00	3,501.00	1	8
47	19-Nov-09	25-Nov-09	1	1	88.00	1,680.00	1	0.92	88.00	1,680.00	1	5
48	26-Nov-09	2-Dec-09	1	5	72.60	2,978.00	1	3.78	90.75	3,722.50	1	2
49	3-Dec-09	9-Dec-09	1	2	74.50	2,870.00	1	1.55	74.50	2,870.00	1	3
50	10-Dec-09	16-Dec-09	1	1	97.00	2,740.00	1	1.01	48.50	1,370.00	1	2
51	17-Dec-09	23-Dec-09	1	2	61.50	2,020.00	1	1.28	61.50	2,020.00	1	2
52	24-Dec-09	31-Dec-09	1	5	77.00	2,502.00	1	4.01	77.00	2,502.00	1	1
	Totals:		**19**	**57**			**19**	**44.6042**				
	Mission Optimization:							**0.00%**			**20**	**45**
	Pallet Optimization:							**21.75%**				

C-17 Model Corrections:

Week			AZ1	(Bastion Airfield, Afghanistan)						
			Original				New			
			# Msns	# Pallets	Avg Height	Avg Weight	# Msns	# Pallets	Avg Height	Avg Weight
8	2/19/09 0:00	2/25/09 23:59	2	33	70.21	7,622.27	2	24.14	92.68	10,061.40
8C*	2/19/09 0:00	2/25/09 23:59	2	33	70.21	7,622.27	2	25.18	89.12	9,674.42

* AZ1 week 8 corrected from 96" to 92" pallet height.

Week			KDH	(Kandahar, Afghanistan)						
			Original				New			
			# Msns	# Pallets	Avg Height	Avg Weight	# Msns	# Pallets	Avg Height	Avg Weight
15	4/9/09 0:00	4/15/09 23:59	8	133	45.46	5,460.20	4	62.98	95.97	11,527.08
15C*	4/9/09 0:00	4/15/09 23:59	8	133	45.46	5,460.20	5	72.84	82.82	9,948.03
17	4/23/09 0:00	4/29/09 23:59	7	118	43.88	4,726.53	3	53.94	95.89	10,328.33
17C*	4/23/09 0:00	4/29/09 23:59	7	118	43.88	4,726.53	4	56.28	90.84	9,784.74

* KDH week 15 corrected from 96" to 93" pallet height. Week 17 corrected from 96" to 92" pallet height.

Week			OA1	(Bagram AB, Afghanistan)						
			Original				New			
			# Msns	# Pallets	Avg Height	Avg Weight	# Msns	# Pallets	Avg Height	Avg Weight
3	1/15/09 0:00	1/21/09 23:59	1	12	38.00	5,582.17	1	4.75	91.20	13,397.20
3C*	1/15/09 0:00	1/21/09 23:59	1	12	38.00	5,582.17	1	6.71	65.14	9,569.43

* OA1 corrected from 96" to 68" pallet height.

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	5b. GRANT NUMBER
	5c. PROGRAM ELEMENT NUMBER
6. AUTHOR(S) Major Myers S. Gray	5d. PROJECT NUMBER
	5e. TASK NUMBER
	5f. WORK UNIT NUMBER

7. PERFORMING ORGANIZATION NAMES(S) AND ADDRESS(S) Air Force Institute of Technology Graduate School of Engineering and Management (AFIT/EN) 2950 Hobson Street, Building 642 WPAFB OH 45433-7765	8. PERFORMING ORGANIZATION REPORT NUMBER AFIT/IMO/ENS/10-06
9. SPONSORING/MONITORING AGENCY NAME(S) AND ADDRESS(ES) Mr. Don Anderson/ Air Mobility Command/AA9 402 Scott Drive Unit 3M12 Scott AFB, IL 62225	10. SPONSOR/MONITOR'S ACRONYM(S)
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12. DISTRIBUTION/AVAILABILITY STATEMENT
APPROVED FOR PUBLIC RELEASE; DISTRIBUTION UNLIMITED

13. SUPPLEMENTARY NOTES

14. ABSTRACT

Pallets transported on Boeing 747 (B-747) and Air Force C-17 aircraft in 2009 were analyzed to determine if relaxing the current pallet height restriction of 72 inches to 96 inches would reduce military airlift requirements in Afghanistan. B-747 missions were tracked from the United States to Incirlik Air Base (AB), Turkey and then C-17 missions were tracked from Incirlik AB to six military airfields in Afghanistan. Using data from Air Mobility Command, three models were constructed to dynamically redistribute historical pallets based on user inputs. These models analyzed and redistributed 502 actual B-747 missions carrying over 7,900 pallets and 593 actual C-17 missions carrying approximately 9,400 pallets using a 96 inch pallet height. Since actual pallet contents were unknown, all pallets were assumed to contain sand to allow redistribution. The models showed that pallet redistribution to a height of 96 inches would significantly reduce C-17 airlift requirements into Bastion and Kandahar airfields in Afghanistan. The other four military airfields were not affected due to cargo throughput throughout the year. B-747 missions showed similar savings. A recommendation was made to change the pallet height restriction from 72 inches to 96 inches for B-747 and C-17 aircraft.

15. SUBJECT TERMS
Supply Chain Management, Inter-theatre Distribution, Pallet, Palletized cargo, height restrictions, 463L, redistribution, B-747, C-17

16. SECURITY CLASSIFICATION OF:			17. LIMITATION OF ABSTRACT	18. NUMBER OF PAGES	19a. NAME OF RESPONSIBLE PERSON Myers Gray, Major, USAF (ENS)
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